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ABSTRACT

This 1993-1997 study nad two objectives: to inquire into the post-transfer academic at a four-year university, and to answer the call for continued research into articulation and transfer. The author found that (1) a group of 561 Northern Virginia Community College (NVCC) students who transferred to George Mason University (GMU) over a 5-year period showed no significant difference in grade point average (GPA) at the time of graduation from GMU when compared with a group of 2,057 GMU native students; (2) age, gender, and race as tests of influence on the success of the NVCC transfer students only accounted for 3% of the variation in graduation GPAs; (3) the NVCC transfer students in this study achieved a graduation grade point performance 13% higher than their earlier counterparts, while GMU native students' GPAs increased only 6.5%; (4) there was no significant difference in GPAs of NVCC students in their last semester and their GPAs after their first semester at GMU, indicating a non-existence of transfer shock; (5) no conclusion could be drawn as to the influence of cultural diversity on academic success, but women did outperform men by considerable margins; and (6) African American NVCC transfers were more successful, with a graduation GPA of 2.97, than GMU African American native students, who averaged a GPA of 2.84. (Contains 45 references.) (NB)

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Articulation, College Transfer, and Academic Success
Northern Virginia Community College Transfer Students and Post-Transfer Success
at
George Mason University

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Arts in Community College Education at George Mason University

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DEDICATION

This doctoral research project is dedicated to the 561 Northern Virginia Community College transfer students who graduated from George Mason University in the spring semesters of 1993-1997. Your success at George Mason University is a legacy to all community college transfer students, present and future.

I would also like to dedicate this project to Northern Virginia Community College and George Mason University. Your cooperation in this research project and your mutual commitment to articulation and transfer not only reinforce close historic ties, they define the spirit that exists between two outstanding institutions.

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ABSTRACT

ARTICULATION, COLLEGE TRANSFER AND ACADEMIC SUCCESS
NORTHERN VIRGINIA COMMUNITY COLLEGE TRANSFER STUDENTS AND POST-TRANSFER SUCCESS AT GEORGE MASON UNIVERSITY

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George Mason University, 2001

Dissertation Chairperson: Dr. Gustavo A. Mellander

Post-transfer academic success of community college students at a four-year university is a controversial one. Despite evidence, many educators, administrators and policy makers remain unconvinced that transferring from a community college to a four-year university is a viable option to an undergraduate degree. This study provides quantitative evidence in support of post-transfer success as well as a qualitative argument framed within pedagogical and sociological imagery.

This study had two objectives: 1) to inquire into the post-transfer academic at a four-year university and, 2) to answer the call for continued research into articulation and transfer. A group of 561 Northern Virginia Community College who transferred to George Mason University over a five year period showed no significant difference in GPA at the time of

graduation from GMU when compared to a group of 2057 GMU native students.

The age, gender and race, as tests of influence on the success of the NVCC transfer students, only accounted for 3% of the variation in graduation GPA's. This led to the conclusion that other factors such as an earned associate's degree, and socioeconomic variable such as parent's level of education and whether the student is a first-generation college attendee may make a greater contribution to academic success.

Transfer shock, and its impact on success, was not evident. Using grade point performance of NVCC transfer students and GMU natives, from the first semester, post-transfer for NVCC transfer students and the end of their first semester junior year for GMU natives showed no significant difference. Taken in concert with no significant difference in mean grade point performance at the time of graduation from GMU, NVCC transfer students, as a group, suffered no transfer shock.

The findings in this study should encourage educators, administrators, and policy makers to consider making the community college the prime provider of lowers level undergraduate education. This would allow universities, particularly public universities to concentrate on the upper level undergraduate programs, graduate education, and research, optimizing the use of public funds and resources.

Chapter One

Nothing succeeds like success-French proverb

In Search of a Better Understanding

The two-year college holds an important place in America's institution of higher education. Once referred to as a junior college, today's public community college is a multi-mission institute of higher learning. Typically, the mission elements involve programs of college preparation, career development, skills training and retraining, remedial education, and community outreach. Intertwined in these mission elements is the notion of life-long learning, a continuum of learning experiences that unites the mission elements into a continuous, overarching commitment to higher education.

Introduction

This research project focuses on the mission element of college preparation, more commonly referred to as college transfer. As one of the oldest of the two-year college programs, college transfer received its first critical appraisal in a doctoral dissertation written early in the 20th Century (McDowell, 1918). But, even earlier in 1907, the University of California at Berkeley (UCB) had begun to encourage California high schools with extended programs to provide college level courses and award certificates of completion for course work traditionally taken

during the first two years at UCB (Rifkin, 1996). These two historical references reflect the rich and enduring heritage of college transfer and its role in bridging the education program of a two-year college with that of a four-year institution of higher learning.

Sociological Images

What is the sociological argument concerning the community college and its program of college transfer? Depending on the perspective, it could be viewed through social conflict or the structural-functionalism of a social institution. In one respect, higher education in America, as part of the social institution of education, is perceived as a great social equalizer, a powerful tool that can leverage social status through the attainment of a college degree. But there is also a contravening view, one that holds that there are disproportional chances and choices in higher education brought about by limiting access through financial affordability, social connections, or other considerations that can deny admission. And while transfer from a community college does afford the opportunity to attend a four-year university, transfer students may not enjoy the socializing foundation or the acclimation to academic life gained by attending the university from the onset of undergraduate studies.

The prospect of social empowerment as a product of higher education and the attainment of a bachelor's degree seem caught in a

contradiction, where the relationship between social equality and the outcomes of education are confounded by the interplay of social dynamics. According to Brint and Karabel (1989), the junior college has been subjected to contradictory pressures rooted in a system of higher education by a society that is both democratic and highly stratified.

The macro-theory of social conflict, when applied to the higher education provided by today's community college suggests a perpetuation of class distinction rather than a leveling of society's playing field. Moreover, apropos to Marx's view on false consciousness, community colleges are often construed merely as a source of *vocationalization*, where one learns skills basic to survival in society rather than the empowerment that comes with a higher education. In effect, according to conflict theorists, community colleges merely take students from lower class backgrounds and do little to help them rise above their ascribed status (Scimecca & Sherman, 1992), or reproduce class and racial distinctions through selective education (Brint and Karabel, 1989).

The social conflict theory and its notion that a college degree is only selectively empowering. The functionalism argument can be made from the proposition that students, who for reasons of insufficient financial means or poor performance in high school, can still train for specific skills that four-year institutions neither cannot nor will not provide (Scimecca & Sherman, 1992). The community college is not a

mechanism for perpetuating a divisive class structure but a vital link in the chain of empowerment, linking higher education with the prospects of higher occupational prestige and higher achieved social status.

But how does the mission of college transfer fit into the crosscurrents of debate between social conflict and functionalism? On the surface, being prepared by the community college for transfer to a four-year institution for bachelor's degree attainment seems empowering. The promise of achieving greater occupational prestige, social status, and higher income that are attached to a bachelor's degree inextricably link post-secondary education to the rewards sought in modern American society (Pascarella & Terenzeni, 1991).

Pedagogical Images

There is another dimension of understanding, a pedagogical perspective that might clarify the sociological debate over higher education, particularly starting a program of higher education at a community college. One facet of this pedagogical image reveals that the four-year colleges and universities are the only true inheritors of America's system of higher education. Billie Wright Dziech (1992) observed that universities have long histories as elitist institutions. Yet today, a high school diploma, long thought of as sufficient for life's goals, provides only limited employment and limited access to the American stage (Birenbaum, 1986). The opportunity afforded by a

community college education, particularly through a program of college transfer, allows a student to reach beyond limited access of the four-year university and, via open access to the community college, eventually gain a place among the elite on the great American stage.

The endurance of the college transfer program, dating back to the beginning of the 20th Century, is compelling evidence of its vitality. But, as the review of the literature indicates, questions still remain about the community college and its ability to prepare transfer students to compete and succeed on par with their native, four-year university counterparts. This question continues to be voiced by those who contend that community college transfer students are academically unprepared and insufficiently equipped to deal with the intellectual challenges of a four-year university (Bernstein, 1986).

Herrnstein and Murray have an overarching view regarding the sociological and pedagogical images. In the Bell Curve (1994), they acknowledge that, while higher education is one of America's success stories, it has a paradoxical shadowy side. Education, according to Herrnstein and Murray, is a powerful divider and classifier. The end result of education affects both income and occupation and divides along these lines. They also contended that open access to higher education in America sorts the college population by cognitive ability and hence by college.

If the logic of Herrnstein and Murray's thesis is extended into the proposition that standardized admission tests examine cognitive ability and can be used to sort potential students by cognitive ability, the community college with its open access side-steps the issue of cognitive ability and does no sorting at all. Therefore, the cognitive abilities of community college transfer students must be suspect, particularly in respect to university natives, who have had to demonstrate their level of cognitive ability via the ACT or SAT.

The debate over cognitive ability and access to higher education is heighten by a program of admission offered by Orange County (NY) Community College. "Opportunity Knocks Twice" (Orange County Community College Catalog, 2000-2001) is a program that allows high school students who have not earned a diploma to earn a high school equivalency diploma by completing 24 college level credits. GED competition and the first year at OCCC are concurrent, allowing the student to complete high school while at the same time beginning a community college education. The open door to higher education via the community college swings even wider with this form of access.

This democratized route to higher education continues to fan the flames of debate, which I believe, can only be resolved by focusing on end results. The success of community college transfer students, as products of open access must be established whether success is real or

imagined. It is to this end that this research project takes its direction.

Nature and Background of the Research Project

This research project is framed by the question: To what extent are community college transfer students successful vis-à-vis their native counterparts? As a former teacher of sociology at Northern Virginia Community College, I wondered about the prospects of success for my students enrolled in college transfer and how would they fare once enrolled in a university's upper level undergraduate program. I knew that some of those transfer students would matriculate to GMU, a university I was attending as a doctoral student in a program of community college education. It was from this musing that I decided to examine the experience of a group of Northern Virginia Community College who transferred to George Mason University from 1993-1997 and to ascertain their success relative to their GMU native counterparts. Stating the question as a null hypothesis: There is no significant difference in success between the graduating senior who has transferred from NVCC to GMU for bachelor degree completion, and the graduating senior who has been a native student at GMU.

A community college transfer student is defined as one who, prior to entering the four-year college or university, has completed at least one full semester's work at a two-year college (Knoell and Medsker, 1965). The native university student is characterized as one who has taken all or,

in the first two years, a substantial portion of undergraduate requirements while attending a four-year college or university. These definitions establish a point of convergence, bringing together two heretofore academically separate groups into a single institutional milieu. It is within this environment that both groups seek to define themselves, to fulfill their educational goals, and to attain academic success.

Academic success can be determined and measured in a number of ways. Earning a bachelor's degree is one measure, one that identifies the recipient as a college graduate and holds social cache in American society. While receiving a bachelor's degree at commencement may be the defining moment in higher education, a valid and reliable quantitative measure of success, such as the graduation Grade Point Average is needed for the conduct of a quantitative analysis. It is to the latter measure of success that this study takes its analytical direction.

In addition to the primary research question of relative academic success, this study examines transfer shock and its impact on success. Knoell and Medsker (1965) described transfer shock as a phenomenon in which community college transfer students experience a decrease in GPA during the first or second semester after transferring to a four-year university. They observed a decline in GPA when comparing the community college graduation GPA with the first or second semester university GPA. They did note however, that for those students who went

on to graduate from the university, a recovery occurred as marked by the university graduation GPA. I was interested in finding whether or not the phenomenon of transfer shock had any impact on the success of the NVCC transfer students.

Approach to Research

This study builds upon the works of others, such as Dorothy Knoell and Leland Medsker. It also responds to a shortcoming voiced by many researchers in articulation and transfer, that there continues to be insufficient data on which to make proper assessments about post-transfer performance. The central question in this research project involves the performance of NVCC transfer students at GMU. The null hypothesis, that there is no significant difference in success between these transfer students and the GMU native students was tested by a series of comparisons between both groups of students. Moreover, I examined the reliability of relative success over time by using GMU graduation GPA's from Spring graduating classes for five consecutive academic years.

The independent variables of age, gender, and race/ethnicity (hereafter referred to as race) were used to test the impact on success exerted by these three demographic factors. The graduation GPA, as the dependent variable, extended into three categories of graduation honors, keyed to a level of graduating with distinction. Wherever relevant, I used

data compiled by the National Center for Educational Statistics as a point of comparison

The phenomenon of transfer shock and its impact on success will be assessed by the variance found in the NVCC graduation GPA, the GPA earned in the first semester of the junior year at GMU, and the graduation GPA. The latter two factors were also compared to the GPA's of the GMU natives as a test of significance

Literature Review

One of the earliest published research efforts into two-year colleges and college transfer are found in Floyd M. McDowell's book, The Junior College (1919). In this classic study, which examined 370 graduates from 12 public junior colleges, 73% of the graduates continued their academic work at a higher institution. This early assessment seems to contradict the later charge that junior colleges were primarily involved with *vocationalization* (Scimecca & Sherman, 1992).

Subsequent studies conducted during the 1920's and 1930's by Walter Eells and Leonard Koos looked at the nature of the transfer program, but made no specific assessment about successful outcomes (Cohen, 1994). It was not until the 1960's that transfer and the question of its success were treated to a rigorous quantitative examination.

The landmark study of Dorothy Knoell and Leland Medsker (1965) not only spoke to articulation and transfer in general, but also in specific

to the performance of junior college transfer students at a university. The authors examined nine major state universities, comparing the performance of 1,393 native university students and 1,700 junior college transfer students who were granted a baccalaureate degree in 1962. Using the GPA as a measure of performance, Knoell and Medsker (1965) found that there was only a .20 GPA difference in the last two years of undergraduate studies, with native students aggregating a 2.88 GPA while the former junior college transfer students had an aggregated 2.68 GPA.

Knoell and Medsker (1965) also noted that, at the end of the first term after transferring from the junior college, former transfer students had a GPA of 2.56 as compared to an aggregated GPA of 2.92 earned at the time of transfer from the two-year college. But, when considered with the GPA earned at the time of graduation from the four-year college, a pattern (2.92-2.56-2.68/junior college GPA-first semester university GPA-university graduation GPA) of recovery emerged. Knoell and Medsker (1965) attributed this to the phenomenon of transfer shock. This phenomenon, they concluded, results from an adjustment to academic demands as well as other factors such as the increased cost of education. This latter concern, attributed to increased levels of tuition and ancillary costs associated with attending a four-year university, was thought to impose financial concerns to transfer students who were not present during their junior college years.

David Menke (1980), in his doctoral dissertation titled A Comparison of Transfer and Native Bachelor Degree Recipients at UCLA, 1976-78, found that there was no significant difference in success as measured by the graduation GPA. Julie Slark and Harold Bateman (1981) studied the academic progress of students transferring from Santa Ana (Community) College to the University of California and the California State Universities and Colleges for academic years 1975-76, 1976-77, 1977-78, 1978-79, and 1979-80. In this five-year longitudinal study, averaging 1,291 transfer students per academic year, Slark and Bateman (1981) found the differential between the graduation GPA from Santa Ana and the graduation GPA from the four-year institution was not significant. Moreover, students who transferred with an associate's degree graduated from the four-year university with a 2.99 GPA whereas the non-associate's degree holders graduated with a 2.96 GPA. Female students earned higher graduating GPA's than their male counterparts, and students less than 21 and over 25 years old achieved GPA's higher than students graduating between their 21st and 24th birth date.

A study performed by Thomas Nelson Community College of Virginia (1990) showed that only 31% of the population in their study transferred with an associate's degree. Steven Graham and Julie Hughes (1992) surveyed 348 students from an unspecified Midwestern state who transferred from a public community college to a four-year state

university. Although Graham and Hughes (1981) found that an earned associate's degree could be used to predict the level of GPA at the time of graduation from the four-year university, they concluded that, with 61% of the responding population holding an associate's degree, this was atypical. They attributed this to well-defined articulation agreements among the institutions represented in their study.

In an American Association of Community Colleges report titled Core Issues in Community Colleges (1997), among a cohort of 5,813 students who transferred from Pima (Arizona) Community College to the three Arizona public universities, no statistical relationship was found between an associate's degree and a bachelor's degree. However, in the same report, referring to research done by Palmer and Pugh in 1993, of 1731 undergraduate transcripts from 1989-1990, only 15% of the students who had attended a community college had earned an associate's degree.

An alternative approach to measuring the success of college transfer has been pioneered by Virginia's Thomas Nelson Community College and Christopher Newport University (publication pending). These two institutions have developed a course-based model for determining transfer success. Rather than look at a comparison of individual success, as measured by grade point performance, this model compares how well transfer students do in those core courses that are requisite to transfer.

Performance is compared to native university students taking equivalent courses at the lower level of their undergraduate studies.

Finally, a recent Illinois Community College System Transfer Study (1998) indicated that 46.6% of the students involved in the study transferred with an associate's degree. But this fact was tempered with the observation that degree attainment was higher in this study than with a national study covering a similar timeframe.

A Singular Focus

The literature deals with a host of considerations about the outcomes of articulation and transfer, and it provides valuable insights into the overall nature of articulation and transfer and the relative success of the transfer student. This research project, however, has a singular focus: the performance of a population of Northern Virginia Community College students who transfer to George Mason University. These students followed a path rich in historical linkage, a connection between two institutions of higher learning that began in the same neighborhood. The relationship between these two institutions, as will be shown in the next chapter, was built on strong historical ties, binding them together into a logical fit of articulation and transfer.

Chapter Two

The Community College

The history of the community college movement in America reflects the political and social changes that are hallmarks of our society. The movement was born out of a reality that, toward the end of the 19th Century, American society was undergoing significant changes, and that elitist attitudes toward social issues such as higher education were becoming inconsistent with the changes taking place. Earlier in the century, republican elitism had been tempered by Jeffersonian and Jacksonian democracy. So as the last decades of the 19th Century slipped away, the Industrial Revolution was heating-up the economy, and the presence of increased mechanization and the promise of greater technologies were placing great demands on the need for a more skilled, higher educated workforce and citizenry.

The institution of higher education in America at times seems to be a paradox of social interaction. For many, higher education is an ennobling experience, providing achievement of a new social status, the ability for social mobility, and the promise of high self-esteem and

prestige. Yet for others, the experience has been one rife with elitism, racism, and sexism. Benjamin Franklin and Thomas Jefferson, respective founders of the University of Pennsylvania and the University of Virginia, saw higher education as a democratic institution, where the traditional narrow views of who should be educated gave way to a broader inclusiveness. But even these two giants of intellect and humanity could not forestall the elitism that would plague generations of students aspiring to attend Penn and UVA. Nevertheless, as our country progressed toward industrialization and democratization, growing liberal attitudes would begin to for a broader spectrum of American society.

One of the problems that our nation would face with its institutions of higher education was their inability to cope with the growing demands being place upon them. The conservative nature of higher education did not accommodate change easily, rationalizing that any abrupt movement would be potentially destructive. Yet if there was to be a solution to this problem, it had to be an innovative one. What was needed, inter alia, was a new strategy that included a more liberal approach to higher education. This would create, in effect, a paradigm shift in the world of higher education.

Even by the turn of the century, change had been in the wind for almost 40 years. The Morrill Land Grant Act of 1862, through the structure of the land grant college, had expanded access to higher

education, making a college education available to students previously excluded from such an experience. By 1890, with a second passage of the Act, public funding of the land grant colleges became contingent upon the elimination of policies that excluded students from attending a land grant college on the basis of race. These two pieces of legislation, although 28 years apart, set the stage for a more liberal outlook toward higher education. Eventually, out of this shift in attitude, a new institution of higher education would emerge; the public junior college, forerunner of today's community college (Vaughn, 1995).

The Early Days

William Rainey Harper, although a product of an elitist education, was one of those rare individuals who saw beyond the limits of his own experience. When Harper became president of the University of Chicago in 1890, he set in motion a plan that, by the end of the decade, would differentiate the university learning experience into two levels, higher and lower. Called the father of the junior college, Harper set into motion a movement that would evolve into viable provider of higher education.

Borrowing from the European model of extended secondary education, Harper built an alliance with the Joliet, Illinois High School. By merging the idea of an extended high school program with a reoriented lower level of a university program, this alliance led to the creation in 1902 of a new institution of learning, the Joliet Junior College.

While the concept of a two-year college was not entirely new, predating Joliet as private institutions of liberal arts or teaching normal schools by 50 years, Joliet's public status was, nevertheless, precedent setting. What Harper had created in the Chicago area soon took roots throughout Illinois as well as in the neighboring state of Wisconsin. And, as time passed, Harper's concept moved westward across the continent to California, where steps were being taken to define its own system of statewide junior colleges. In the ten year period, 1907-1917, legislation was passed authorizing high schools to offer postgraduate courses, independent junior college districts were established, with their own boards, budgets, and procedures; and state and county financial support was made available to junior college students.

During this same timeframe, the University of California at Berkeley started encouraging California's high schools with extended programs to provide college level courses and to award certificates of completion for course work that traditionally had been taken during the first two years at UCB. Students who desired to transfer to UCB could take up to 45 credits while still in high school, thus making this one of the earliest schemes of articulation (Rifkin, 1996).

In the early 1920's, the American Association of Junior Colleges was founded, providing two-year colleges with needed leadership, direction, and national focus. In the decade that followed, the Association

began publishing a journal. Today, the successor organization, the American Association of Community Colleges, continues to provide the needed vision that will lead the community college movement into the future.

From the ranks of the Association's leadership have come some of the most influential agents of change. George Zook ignited the spark that kindled the AAJC; Walter Eels was the first editor of the Journal; Leonard Koos helped shape the early direction of the AAJC; Jesse Brogue helped steer the movement through the hyper activity of the immediate post-WWII years; Edmund Gleazer and Dale Parnell, who in a period of over three decades, presided over the maturation of today's community colleges (Vaughan, 1995), and George Boggs, to whom, as the current president of the AACC, falls the task of guiding the community college movement into the 21st century). Along with such prolific writers as George Vaughan, Arthur Cohen, Florence Brawer, and Terry O'Banion, this illustrious group of educators has made a unique and substantial contribution to the community college movement.

To this illustrious group of pioneers and activist must be added the name of Floyd Marion McDowell. As mentioned in Chapter One, his doctoral dissertation was, at the time, the seminal study of the junior college movement. In fact, according to Witt (1994), McDowell's book, The Junior College (1919), caught the attention of George Zook, who in

1920 was the senior specialist on higher education in the Department of the Interior's Bureau of Education. He was sufficiently impressed with McDowell's insights that he began a series of correspondence with some presidents of junior colleges. This lead to the call for a conference in the summer of 1920, from which the American Association of Junior Colleges (the forebearer to today's American Association of Community Colleges), emerged. As a party to these deliberations, Floyd McDowell became a charter member of the association. A more detailed treatment of F. M. McDowell's contributions to higher education is found in the next chapter.

The Middle Years

In 1925 and 1931, Leonard Koos and Walter Eells, respectively, wrote about the development of the public junior college; of its growth, its programs of study, and its role in increasing access to higher education. However, any promise of the future was put on hold during the Great Depression and the Second World War. But what followed was nothing short of a social explosion. Two key events, the GI Bill and the Truman Commission, prompted a new series of social dynamics that forever altered the community college movement.

Formally known as the Servicemen's Readjustment Act of 1944, the GI Bill provided financial assistance to those veterans who wished to pursue a higher education. This milestone of federal funding did much to

break down the economic and social barriers that had stood between both the working and lower middle classes of our society, and their access to higher education. For many veterans, ties to family and community precluded them from going off to a four-year university. Fortunately, the proximity of the junior college offered a higher education experience without interfering with the responsibilities of family and parenthood. Moreover, this opportunity did not accrue merely to the traditional white, male population of college students. For the first time, tens of thousands of African-Americans and women were afforded the experience of higher education, setting in train a tradition of democratic education that lives on today (Vaughan, 1995).

The President's Commission on Higher Education, popularly known as The Truman Commission, published a report in 1947 that was to have a profound impact on the future of the community college movement. Chaired by George Zook, at that time president of the American Council of Education, the Commission recommended that, henceforth, public junior colleges should be referred to as community colleges in recognition of their community-based orientation. Additionally, these community colleges should be publicly supported, two-year institutions, offering adult education programs in general and technical fields of learning, and at a cost of little or no tuition. In effect, the community college put higher education within easy reach of most citizens, something Thomas Jefferson

had dreamed of a century and a half prior (Cohen and Brawer, 1989).

The Modern Era

While these national events were shaping the overall tenor of the community college, California continued to refine its system. In the 1960's, California, acting upon earlier studies and recommendations, enacted a Master Plan for Higher Education, which would harmonize efforts of both public universities and community colleges. This pioneering effort did not go unnoticed, as evidenced by the initiatives eventually undertaken by Florida and Virginia.

Earlier, in 1947, Florida had begun to develop its own unique infrastructure by giving its public junior colleges full legal status as institutions of higher education. After struggling through a period of uneasy growth, by the 1960's, Florida had overcome obstacles of funding and procedural relationships and had forged a system of statewide junior colleges that aligned these institutions with a local jurisdiction. In 1966, when Virginia organized its own system of community colleges, the Commonwealth opted not for a decentralized system. Instead, Virginia created a centralized state governing body called the Virginia Community College System to manage the 23 newly designated community colleges.

In 1960, the Kellogg Foundation began awarding grants to help establish university centers for training community college administrators. This program would bear rich fruit, preparing a new

generation of community college leaders to take the helm of their respective schools. Many future deans and presidents of community colleges would look back on this experience as the training ground that prepared them for the many challenges that lay ahead (Witt, 1994).

The initial concept of the comprehensive community colleges was placed on center stage in 1947. Edmund Gleazer, while serving as president of the newly reorganized American Association of Community and Junior Colleges, sounded the clarion call that community colleges, in the future, must focus on total needs of the community rather than on a narrow agenda. Today, these programs characterize the comprehensive nature of the public community college, as reflected by its multi-dimensional mission (Vaughan, 1995).

In its simplest form, the mission of a community college is to provide post-secondary education for citizens living in its service region. This frame of reference translates the mission into a series of commitments, providing the agenda by which the community college fulfills it responsibilities. Foremost among these commitments is service to the community, i.e. providing quality educational programs that are geographically and financial assessable, and on an open access basis. Next, come commitments that speak to the excellence of teaching, and respond to the desire of lifelong learning. Finally, there is the sense of

community outreach, acknowledging the community college as a partner and resource for community building.

Superimposed on these educational programs is the ever-growing cultural diversity of the community college student population. While not totally a universal phenomenon-its effects differ depending on the venue, urban, suburban, or rural-the challenge imposed by age, gender, race, and ethnicity is real and significant. David Pierce, who began his own higher educational experience as a community college student, sees this challenge not a daunting one but one that builds upon the work done by the community college in creating innovative education that spans the cultural spectrum (Vaughn, 1995).

The Future

While the future of the community college looks bright, there are near term problems in coping with success. The community college often finds itself beleaguered, having to make tough decisions and juggle resources to support competing programs. But, fortunately, the picture is not entirely bleak. Terry O'Banion (1997), in his book A Learning College for the 21st Century, contends that today's four-year colleges are built on an outmoded model, one that harks back to the transitional time between the Agricultural and Industrial Revolutions. He argues that times are ripe for a paradigm shift, one where learning is the primary consideration. O'Banion (1997) feels that the community college, with its

demonstrated penchant for innovation, is ideally positioned to deliver quality education, anytime and anywhere.

A Tale of Two Institutions

The roots of higher education in Virginia were planted as early as 1693 with the founding of the College of William and Mary and were replanted in 1819 with the birth of the University of Virginia. Yet the advent of the two-year college in Virginia had to wait until the time of Reconstruction, with the founding of private finishing schools for women. It would take until 1913 for the full impact of the two-year college to be felt, when in that year, a set of standards was adopted for these colleges. By the end of the decade, Virginia had 12 junior colleges, 11 for women only. Nevertheless, a significant step had been taken; the commonwealth began to accredit its junior colleges, using the state's educational department as the accrediting agency (Witt, 1994).

Decades would pass, filled with changes brought about by the two World Wars and the Great Depression, before Virginia's public institutions of higher education would evolve into a cohesive structure of publicly funded two- and four-year colleges. Yet the structure, even as it matured, could not cope fully with the demands being placed upon it. In Northern Virginia, in particular, there was a growing demand for college-level educational opportunity, but the local infrastructure was incapable of satisfying these demands. This set the stage for the expansion of two

fledgling schools, one with ties to the University of Virginia, the other with roots as a technical college (Netherton, 1978).

The history of GMU and NVCC began in a section of Northern Virginia called Baileys Crossroads. Named for the circus impresario, this area surrounded a road junction whose adjacent fields were used as winter quarters for the now famous Barnam and Bailey Circus (Netherton, 1978). GMU, named for the Virginia patriot who was active in the founding of our nation and as a framer of the Constitution, began in 1957 as a branch of the University of Virginia. Initially, seventeen students met in a renovated elementary school. By 1964-1966, thanks to a donation of 150 acres by the City of Fairfax and the actions of the Virginia General Assembly, George Mason University became a reality. Since then, the university has grown into a three-campus institution, with an enrollment of about 24,000 students and an extensive academic program (Acosta-Lewis, 1989).

NVCC came into existence in 1964, initially chartered as a technical college. By the 1960's, Virginia had regularized its junior colleges, much like Florida had done in the late 1940's. By act of the General Assembly in 1964, the Commonwealth established a statewide system of technical colleges. One of these colleges was the Northern Virginia Technical College. Two years later, the General Assembly passed the Community College Act, which transformed the technical colleges into

comprehensive community colleges and placed them into a statewide system that was to be known as the Virginia Community College System (Witt, 1994).

NVCC began operations in a warehouse with an initial enrollment of 761 students. With a purchase of 78 acres of land in Annandale, Virginia, NVCC opened the first of its five campuses in 1967. Today, NVCC operates in four counties, supporting a fulltime student population of over 36,000. Dr. Richard Ernst, who would serve for 30 years, became NVCC first permanent president in 1968. For the next three decades, he would guide NVCC from infancy to maturity as the largest community college in Virginia and one of the largest in the United States.

According to Ernst (1998), the relationship between NVCC and GMU grew out of a reality that the community college was producing a growing number of students whose goal was to transfer to a four-year university. A logical path for these students to follow ended just five miles away at GMU. It was, therefore, this natural fit that brought about the close relationship that has endured between NVCC and GMU.

George Johnson was inaugurated President of GMU in April 1979. He joined Ernst in a dynamic partnership, and together they would lead NVCC and GMU toward new levels of cooperation. Prior to his appointment, GMU had gone through a number of name changes, each signifying to a change of status. In 1949, the Northern Virginia Center of

the University of Virginia opened its doors for the first time. For the next 37 years, the Center would go from a two-year branch college of the University of Virginia to a fully independent state university. Though independent status preceded Johnson's taking office by seven years, he seized the opportunity to continue GMU's transformation from a small liberal arts college into a major university.

Ernst and Johnson shared a similar vision, that of making Northern Virginia a region of academic excellence. With Johnson's flair for public relations and Ernst's steadfast commitment to community-based education, they would periodically invite key decision makers to hear about the success of both institutions and to solicit support for their future growth. Not only did these presentations solidify the position of both institutions, it endeared them to those legislators and administrators who were the stewards of public funding. It also strengthened the ties that existed between the two schools.

One of the areas that profited by these close ties was that of articulation and transfer, which will be dealt within in greater depth in the next chapter. Suffice to say, for the present and the foreseeable future, there are strong indications that NVCC and GMU will continue to maintain a vital, mutual relationship. Beyond their similar historic backgrounds, GMU and NVCC currently share mutual spheres of community involvement. Both institutions are members of a consortium of

public and private sector organizations, working toward preparing the next generation of information and medical technology professionals. As the region's principle institutions of training and education, NVCC and GMU are key players in resolving the imbalance of supply and demand regarding technology competent workers that exists in Northern Virginia and other nearby counties. This kind of collaboration serves to further reinforce the close ties between the two institutions, and helps build bridges on which to transfer from one institution to the other. It is to this spirit of cooperation in articulation and transfer that I focus the subject of this research project.

Chapter Three

Floyd Marion McDowell: Portrait of a Pioneer

Floyd Marion McDowell begins his book, The Junior College (1919) with this observation of the institution of higher education:

> American institutions are an expression of American spirit. Neither can they be understood apart from the other. Nowhere is this more true than in the field of education.

Education was his life-long avocation, but his passion was the junior college, whose evolution is represented by today's community college. As a graduate of a junior college, Graceland College, and a transfer student at the University of Iowa, McDowell had intimate experience in articulation and transfer. But what makes his contributions to the institution of higher education so valuable was timing, for he was at the right place at the right time. Under his leadership, Graceland College became Iowa's first official junior college, receiving its recognition from the University of Iowa at a time when higher education in America was undertaking a paradigm shift. This unique set of circumstances, coupled with outstanding scholarship enabled McDowell to be a true visionary, a pioneer in the junior college movement.

A contemporary of George Zook and Leonard Koos, McDowell quietly and unassumingly helped development and gain acceptance of the junior college as a viable alternative to traditional higher education. Edmund Gleazer, then president of McDowell's alma mater, Graceland College, and eventual president of the AACC, recognized McDowell's contributions with a cover story in the January 1950 edition of the Graceland College Alumni Magazine. Other honors followed: the opening of the Floyd M. McDowell Commons in 1961 and the bestowing of an honorary Doctor of Humane Letters in 1963. Yet Gleazer's subtitle to the article, "Looking to the Future," expressed the true essence of McDowell and his pioneering spirit.

McDowell would eventually leave higher education and seek a new challenge in education with the Reorganized Church of Jesus Christ of the Latter Day Saints. But his experiences at Graceland College, as a student, teacher, and college dean, and his scholarship at Clark University and the University of Iowa are at the heart of his insights and his eventual contributions to higher education. His scholarship, as seen in his master's thesis and doctoral dissertation, was incisive and prophetic. Together, these two documents, along with his 1919 book, The Junior College, were at the time the seminal works on the two-year college.

Beginning at the infancy of the junior college movement, McDowell waged an ardent campaign to install the junior college into the pantheon

of higher education. At a time when the institution of education in America was undergoing extraordinary changes, McDowell reflected that

> From time to time, we have seen radical departures from the traditional forms of education; the emergence of the junior high school in secondary education and the advent of the junior college in higher education. Standardizing the junior college and perfecting its organization seem to be now the pressing problem (The Junior College, 1919).

His exploration and commentary on the birth and early development of the junior college represented a major effort toward the early nature of the two-year college and understanding its impact on higher education. But these contributions are best understood from the perspective of Floyd McDowell's life, from his childhood through his years as a student, teacher, scholar, and educator. While his master's thesis, doctoral dissertation, and book provide a well-documented source of information, unpublished and often undated documents such as an interview, letters, and a biographical sketch provided an even fuller measure of the man.

The Making of a Pioneer

Pioneers are born and then made. So it was that on March 26th, 1889, in Richland Center, Wisconsin, the wife of a travelling Mormon missionary gave birth to a son, who was named Floyd Marion McDowell. Baptized in East Delaven, Wisconsin on the first of October, 1899 by his father, Willis A. McDowell, young Floyd would remain devout member of

the RLDS throughout his life, often taking strength from his faith in times of challenge.

According to an unpublished interview found in the archives of Clark University, McDowell was the third of four children, having an older brother and sister and a younger brother. At five years old, the McDowell family moved to Lake Geneva, Wisconsin where young Floyd attended elementary school in a one-room schoolhouse. He remembered the teacher keeping a hickory stick close by as an inducement to learning.

He attended Delaven High School, Wisconsin in his last two years of secondary school, graduating in 1907. He recalled in an unpublished, undated interview being a boarding student at a make-shift high school for his freshman and sophomore years, doing chores such as hitching up the doctor's horse-drawn carriage at all hours of the day and night. The doctor's wife, given to spates of laziness, often left dirty dishes for McDowell to clean. These early experiences no doubt shaped McDowell's sense of responsibility and work ethic and would serve him well when he went off to attend Graceland College in Lamoni, Iowa.

In a 1959 letter from McDowell to Dr. Harvey M. Grice, then the president of Graceland College, McDowell provided a list of some of his interesting "firsts." He was the first student from his high school to go on to college. McDowell had probably heard of Graceland College and its affiliation with RLDS through his parents. So in 1907, McDowell traveled

to Lamoni, entering Graceland as an industrial student, akin to a work-study program since his parents could not provide financial support. According to the January 1950 edition of Graceland College Magazine, McDowell was responsible for taking care of the college's flock of chickens. Ironically, from this humble undertaking would come the future dean of the college.

The Graceland College that McDowell first saw was a beleaguered institution, struggling with inadequate facilities and a dwindling enrollment (Edwards, 1972). Graceland had begun its existence as church-sponsored four-year college in 1895 (Cheville, 1946). But by 1907, still offering both upper and lower level programs of undergraduate education, it was hard-pressed to continue both levels. As will be seen, this would remain a lingering problem, one that became McDowell's first great challenge as an educator.

In 1907, Graceland had only a girls dormitory and did not have a commissary, as the eating facility was referred to, until two years later (Edwards, 1972). McDowell, according to the RDLS achieves, had to bear some very unfavorable conditions. Some students slept in the attic, while McDowell found sleeping space in the basement of the Administration Building next to the coal bins. Once, when his mother came for a visit, she found the walls covered with dampness and mildew under the carpets of his room. But McDowell persevered, and completed a two-year program

in college studies in 1909. It was also at this time that he met his future wife, Lucy Goode, a fellow student at Graceland. They married at the end of July 1912.

McDowell transferred to the University of Iowa in 1909, graduating from that institution two years later in 1911 with a Bachelor's of Arts. Returning to Graceland after graduation, McDowell joined the faculty as a professor of psychology, history and education. But Graceland, now facing a crisis, turned to McDowell for a solution. In 1912, after conducting a study, McDowell recommended to the college's board of trustees that Graceland become a two-year college, patterned after the concept developed by William Rainey Harper. He also recommended that Graceland become an accredited institution and that it offer an associate's degree (Edwards, 1972).

The Board accepted his proposals and charged President Samuel Burgess, with the assistance of McDowell, to implement them. In 1913, McDowell applied for and was granted a graduate scholarship to Clark University in Worchester, Massachusetts. This quest for graduate education would set a Graceland policy for faculty members to take advanced studies at some of the most outstanding universities in the United States (Cheville, 1946). It seems that McDowell intuitively understood the pedagogical imagery of college transfer. As a transfer student, he had earned a bachelor's degree at a four-year university, thus

affording him the academic credentials needed to teach at his former junior college. Three years later, recognizing a need for advanced education, McDowell took an important step, one that prepared him for the challenges of leading Graceland into the junior college movement.

McDowell was adamant in his desire for advanced eduction. This is evident through a series of unpublished letters furnished by the Clark University Library. During May 1913, McDowell exchanged correspondence with the president of Clark University, G. Stanley Hall. In addition to gaining admission to Clark, McDowell also marshaled financial support. As a young husband, McDowell was in dire financial need, and while Graceland College gave moral support, it could provide no financial support.

Nevertheless, with strong endorsements from Fredrick E. Bolton, dean of the University of Washington School of Education and J. A. Gumsolley, acting president of Graceland College, McDowell gained admission to Clark. He also secured a Junior Fellowship, which covered all fees plus an annual stipend of $100.00. So, taking a leave of absence from Graceland and with only modest of means in hand, Mr. and Mrs. McDowell traveled across the country to Worchester, a journey that took them, as characterized by McDowell, as far away from Iowa as going to the Fiji Islands.

A Pioneer at Study

The capstone of F. M. McDowell's scholarship at Clark University was his master's thesis, The Problem of the Small College (1914). Inspired by his study of Graceland and its struggle as a small college, it was an in-depth and wide-ranging examination into the institution of the small college circa the early years of the 20th Century. Yet, while it was focused on the contemporary status of the small college, it foretold some of the problems that still confound today's community colleges.

As many researchers can attest, no study is problem free and McDowell experienced his share of frustrations. In a questionnaire sent to 200 small colleges, only 45 respondent colleges completed the entire questionnaire. But, cautioning his readers to take this into account, he provided a thorough analysis of the small college, including mission, organization, standards, curriculum, faculty and administration qualifications, and student life.

The later was particularly insightful because it dealt with questions of moral and ethical training, something very reflective of McDowell's own background. But the most relevant area of investigation involved the problem of the small college and its attempts to provide a balanced four-year program within constrained financial and materiel resources. McDowell believed that the beleaguered small college's best alternative

was to concentrate its efforts at the lower level of higher education, in effect adopting the model of the junior college

According to McDowell, the junior college, already in existence, could serve as a model for streamlining the organization and operation of the struggling small college. In the junior college, McDowell saw an opportunity for students to complete either a two-year program of education, honorably without the social stigma of failure, or to go on to a four-year university, having successfully completed lower division requirements. The latter was a remarkable pronouncement, made at a time when articulation and transfer had only a meager acceptance as a path toward a bachelor's degree.

McDowell seemed to grasp the implications attached to students in their desire for success in higher education. He also saw the institutional intransigence attached to some educators and policy makers who were unwilling to accept alternative routes to higher education. These insights gave proof that he understood the sociological and pedagogical images that were being cast upon higher education.

More than three decades before the Truman Commission recognized the role the junior college ought to play in the community, McDowell saw a specific need for closer community involvement on the part of the small college. He reckoned that communities had special educational needs, be it agricultural or industrial, and the local small college was well

positioned to satisfy these needs. This approach challenged the conventional wisdom of the small college that saw its mission as offering an academically oriented curriculum. Eventually, this approach would fit well into what the junior college was willing to provide and set the stage for today's multi-mission community college.

McDowell also recognized the need for greater cooperation between the small college and the four-year university. This idea would come to fruition when in 1919, the University of Iowa give Graceland College official recognition. This act must have been most gratifying to McDowell, the former transfer student from Graceland now attending Iowa again, this time as a doctoral student. This vision of greater cooperation had far reaching implications; one day it would be the cement that bonds community colleges and four-year universities through articulation.

McDowell returned once again to Graceland, this time not only as a teacher but also as the dean of the fledgling junior college (Cheville, 1946). It was also at this time that the McDowell's first experienced parenthood with the birth of their eldest daughter, Wilda Lee, in 1914. But Graceland's future course of direction continued to be tentative until the following year when McDowell gained a new ally, George N. Briggs.

Briggs, succeeding Samuel Burgess as the president of Graceland. Briggs, was a champion of accreditation and soon launched a strong but

protracted campaign to acquire it. At first, Iowa was reluctant to grant accreditation to a junior college, so Briggs turned to the state of Missouri. But in the eleventh hour, Iowa, unwilling to be bested by a neighboring state, demurred. After four years of negotiations, accreditation was granted in 1919, making Graceland the first official junior college in the state of Iowa. This was most welcomed since more Graceland students went on to the University of Iowa than any other institution. And, with accreditation, Graceland's graduates earning an associate's degree, were now accepted into any degree-granting university without further examination (Edwards, 1972).

These are remarkable examples early efforts in articulation and transfer, one that must have been most gratifying to McDowell, who now held a Ph.D. in Education from the University of Iowa. He had taken another leave of absence from Graceland in 1917 and returned to the University of Iowa, receiving a senior fellowship in the Department of Education. This arrangement allowed him the time to research and write the most definitive work of its time on the junior college. His dissertation, The Junior College-A Study of Its Origins, Development, and Status in the United States (1918) is the earliest and most comprehensive scholarly work on the two-year college. Published the following year under the sponsorship of the US Department of Interior's Bureau of Education, The Junior College (1919), a condensed version of his

dissertation would play a pivotal role in igniting the idea of a national association of junior colleges.

The distant origins of the junior college lay in the French Lycee and German Gymnasium. These forms of extended secondary education became the starting point from which innovating educators like William Rainey Harper conceptualized a new alternative to higher education. Taking a slightly different view, McDowell saw the roots of the American junior college springing from four sources: 1) the lower division of the four-year university; 2) the two-year normal school or teacher's college; 3) the public two-year college; and 4) the private two-year college, often tied to a religious denomination. It was from this latter institution that Graceland College evolved.

In conducting his research, McDowell surveyed 218 two-year colleges and 60 leading universities and four-year colleges. Once again, he faced the frustration of a less than adequate response. Cautioning the reader not to over-generalize the results of his study, McDowell nevertheless did remarkably well with the data collected.

In formulating his views of the junior college, McDowell revisited the problem of the small college. He found some small colleges still struggling with priorities; whether to sustain both an upper and lower division or concentrate on the lower level of undergraduate education. McDowell became more convinced that the solution to the problems that

beleaguered these small lay in the junior college movement. He found a momentum being built in the movement, with a steady growth of two-year colleges in numbers and in official recognition. He also found that there was a need for standards in curricula and in faculty qualifications. These points would be central to accrediting those colleges who were transforming into junior colleges.

When McDowell looked at private and public junior colleges, he found some perplexing and contradictory results. Based on 19 public and 28 private junior colleges (these institutions provided the most complete survey responses), McDowell found a similarity in the frequency of subjects offered. Both types of junior colleges most frequently offered courses in the arts and sciences, with rather small offerings in vocational and occupational training (17.5% for public junior colleges and 9% for private junior colleges).

McDowell found that the private junior colleges were primarily terminal institutions of education. This conclusion was based on the number of students from each type of junior college who went on to a four-year university. Using data provided by 12 public junior colleges and 53 private junior colleges for the years, 1915-1917, McDowell found that 73% of public junior college students transferred to a higher institution whereas only 41% of the private junior college student continued their higher education.

Regarding the types of degrees granted, McDowell found that among a population of 53 private junior colleges, 33 granted no degree, 15 granted an associate's degree, and 6 granted bachelor's degree, the latter being awarded to students who completed an expanded program of instruction. Among a sample of 19 public colleges, 18 granted no degree and only one granted an associate's degree.

McDowell's analysis of degrees conferred at the junior college level showed an ambiguity, one that still exists in today's community college and the attitude toward how essential an earned degree is to articulation and transfer, particularly as a predictor of post-transfer success at the four-year university. While the question of success based upon an earned associate's degree may not have been of immediate interest to McDowell, he must have taken serious note to the lack of degrees conferred by junior colleges. His vision of Graceland as a recognized junior college would include the awarding of an associate's degree.

Another unique area of investigation involved an analysis of teaching workload. As a measure of workload, McDowell used the number of periods or hours taught per week (which he referred to as recitation period). He found that junior colleges teacher spent 16 hours per week in the classroom as opposed to an average of 12 hours per week spent in the classroom by university and four-year college faculty. However, when he

isolated just on lower division classes, he found that teachers in both junior and senior institutions taught about eight hours a week. McDowell concluded that junior college teachers were spending about half their time in teaching either high school level course or upper level courses. This observation about teaching secondary education level courses foreshadowed the contemporary debate over remedial education and the extent that community college should be involved in remediating the academic shortcomings found in many high school programs.

Three of McDowell's specific conclusions have had long range implications. He believed that the word "junior" should be an integral part of the title of a junior college, giving it a clear identity in the institution of higher education. The 1948 Truman Commission had a similar sentiment, recommending that the public junior colleges be referred to as "community colleges." McDowell felt that public junior colleges should develop close ties to the community. The Truman Commission also believed strongly that the public junior college should be community based and take an active part in the educational affairs of the local community. McDowell saw a need for public junior colleges to affiliate themselves with a state level system of higher education. This vision of the public junior college as a member of a statewide coalition of public higher education has been realized in a number of states, particularly in the Commonwealth of Virginia where the state council of higher education

oversees the public universities and the state system of community colleges

A Pioneer at Work

When McDowell returned to Graceland, he resumed his post as dean as well as being elected to the college's Board of Trustees. Reunited in their efforts to build Graceland into a sound and stable institution of learning, McDowell and President Briggs continued their campaign toward accreditation and recognition, a campaign they would win in 1919. But also in 1919, with the publishing of his book, McDowell was thrust into a new arena. George Zook was the US Bureau of Education's senior official dealing with higher education. He read McDowell's book and was impressed by what he saw. After sharing his thoughts with a number of senior educators, Zook convened a meeting of presidents of public and private junior colleges. Meeting first in Saint Louis in 1920, and then in Chicago the following year, from this conference came the birth of American Association of Junior Colleges, the forerunner to today's American Association of Community Colleges (Vaughan, 1995). According to a list of "firsts" included in 1959 letter sent to the then president of Graceland College, Harvey H. Grice, McDowell was a charter member of the Association. Once again, in his own quiet way, McDowell exerted an influence on higher education and on the junior college movement.

In 1922, McDowell traveled to the headquarters of the Reorganized Church of Jesus Christ and the Latter Day Saints in Independence, Missouri. The RLDS had come into being in the 1850s, believing that Joseph Smith, Jr. had designated his eldest son, Joseph III, to be his successor as president of the Mormon Church. The Reorganized Church, separating itself from the Mormon Church, was officially organized on April 6, 1860, in Amboy, Illinois, under the leadership of Joseph Smith III. In 1915, Frederick Madison Smith succeeded his father to the presidency, and in April 1920, the headquarters of the RLDS was moved to Independence, Missouri.

McDowell recalled in an unpublished, undated interview found in the archives of Graceland College that Fredrick Smith asked him to go for a ride. During the ride, Smith told McDowell about a revelation, that McDowell should be ordained and called to be a counselor to the First Presidency, the senior executive body of the church. So in 1922, McDowell, newly ordained, became a member of the First Presidency while retaining his position at Graceland. His area of work in the First Presidency was with religious education, young people's work, scouting, and priesthood training. He would remain in the dual capacity as Graceland's dean and counselor to the First Presidency until 1925 when he relocated to Independence. Except for three years, from 1930-1933, when the McDowell Family moved back to Lamoni while their eldest

daughter, Wilda Lee, attended Graceland College. Independence would be home.

In the years following 1925, McDowell continued to serve Graceland College as member of the Board of Trustees, as its vice-director and director, and as the president of Graceland's alumni association. But now, his main focus was the Church. In addition to being a member of the First Presidency, McDowell served as the director of the Institute of Arts and Sciences, an adult continuing education program. He undertook special work, reorganizing the priesthood and traveling throughout the United States and Canada. McDowell resigned from the First Presidency in October 1938 to give full time to Religious Education. He served as director of the church's Religious Education Department and supervised the young people's program for the general church. In 1948 he resigned as Director of Religious Education to assume the directorship of Priesthood Education for the Church.

Notwithstanding a most active schedule, Floyd McDowell remained a scholar. He authored a number of books, ranging in topics covering leadership, marriage, home life, social problems and history. Ever the educator, he sought to provide his readers with a rich menu of things to learn and think about. So when he died on 27 October 1964, he left a rich legacy of deeds, words, and pioneering spirit.

Floyd Marion McDowell opened the door to understanding the junior college and how it fit into America's scheme of higher education. His vision in the early 20th Century helped build the foundation upon which the modern version of the junior college, the community college, now stands at the beginning of the 21st Century. McDowell saw the public two-year college further democratizing the institution of higher education. Through the perspective of his experience, coming from humble origins was not limiting. Higher education gained through less than traditional ways could indeed be empowering.

McDowell's insights are ample evidence that he fully understood the pedagogical potential that a two-year college education could offer. His life as a student was spent in a constantly, upward progression, whose momentum came from shear doggedness despite financial stumbling blocks and the strong desire toward scholarship. These forces propelled Floyd McDowell forward, from junior college to the university and beyond. When wrote about the need for accreditation, of granting an earned degree, and forging an alliance with a state system of higher education, he must have been seeing these requirements the perspective of pedagogical imagery.

McDowell's vision, that the junior college, and in the future the community college, could be a viable sources of higher education and a viable alternative to traditional forms of education are in keeping with the

pioneering spirit of William Rainey Harper and the innovative spirit of Terry O'Banion. Like Harper, McDowell was a visionary, imbued with a pioneering vitality and the vigor to turn these visions into deeds. And like O'Banion, McDowell challenged the status quo and dared to see beyond the narrow confines of conventional wisdom. To this end I dedicate this chapter, in memoriam, to Floyd Marion McDowell.

Chapter Four

Articulation and Transfer

The mission element of college transfer, almost universal to the nation's community colleges, speaks to some of our most cherished values: the right to seek self-improvement and to be afforded the opportunity to do so. The community college, through its college transfer program, provides an avenue to opportunity, bridging the distance from the junior to the senior college and providing a pathway from one institution to the other.

The Meaning of Articulation and Transfer

Articulation, according to the Oxford English Dictionary (1989), is the action, process, and mode of jointing. These words describe both an active and passive structure. This connotation of action and structure resonates in the definition offered by Kintzer and Wattenbarger (1985), that *articulation* refers to the entire range of processes and relationships involved in the systematic movement of students interinstitutionally and intersegmentally throughout postsecondary education. Although Kintzer and Wattenbarger do not elaborate on the distinctions between *interinstitutionally* and

intersegmentally, these two words seem to imply a sense of structural dimension, conceptualized as a range of processes and relationships.

The State Council of Higher Education for Virginia (SCHEV), which is the coordinating body for higher education, provides another definition of articulation. One of the standing committees of SCHEV, Virginia's Joint Committee on Student Transfer (JCST), in its 1996 edition of *Transfer Connection*, defined *articulation* as a systematic process, in which the community college and senior institution match and coordinate the requirements of degree programs to facilitate student progress through each level of education. This definition, by providing a more operational meaning, assigns to the community college and the four-year university a mutual role in the dynamics of articulation and in the success of those students who transfer from one institution to another.

The Oxford English Dictionary defines *transfer* as to convey or take from one place, person, etc. to another, to give or to hand over from one to another. This definition captures, in a broad context, the more specific meaning of *transfer* assigned by Kintzer and Wattengarber (1985) which include the mechanics of credit, course, and curriculum exchange.

SCHEV takes a different approach to the meaning *articulation* and *transfer*. According to the State Policy on Transfer (SPT) (1997), entry to senior colleges or universities by community college students, i.e. college transfer, is central to the realization of equal opportunity in education. In

effect, the State Policy on transfer places articulation and transfer in a complementary relationship.

The institutional documents that implement this relationship are referred to as the *articulation agreement*. The SCHEV's JCTS, as reflected in the 1996 edition of *Transfer Connection*, defined the *articulation agreements* as formal documents that provide certain guarantees to transferring students. These guarantees are specified in the sequencing of courses, the credits granted for course equivalencies, and any additional courses or requirements that must be met to complete the baccalaureate degree at the four-year college or university. Hence, this agreement institutionalizes the process of articulation and the mechanics of transfer as well as rationalizing some of the complexities inherent in its implementation.

A Brief History of Articulation and Transfer

During a better part of the 19th Century, America possessed an elitist view of higher education. But toward the end of the century, with succeeding waves of democracy having swept the nation, new attitudes toward higher education began to arise. The German model of education, with its gymnasium extending the education experience until about twenty years of age, offered an enticing alternative to the traditional American model of a shorter and differentiated secondary education. This model yielded both a skilled and educated citizenry, allowing the more gifted to

attend the universities, while enabling others to develop skills and to join the workforce in a burgeoning, industrialized economy. The notion of an extended high school program, with both educational and vocational programs, seemed well suited for America, where the industrial revolution was getting up a full head of steam. This notion would eventually transform into a new player in the arena of higher education, the two-year college. While some would be technically oriented, others would begin to provide an alternative path to a full four years of undergraduate education.

At the turn of the century, William Rainey Harper, one of the luminaries of American higher education, became president of the University of Chicago. Soon after his appointment, he began considering a new form of higher education, where the upper and lower levels of undergraduate education could be offered in different institutions. He encouraged others to share this vision by creating a network of high schools affiliated with the University of Chicago. One of these affiliations was with nearby Joliet (Illinois) High School, whose principal and fellow visionary was J. Stanley Brown.

In 1900, Brown announced his intention to offer post-diploma courses. Brown's actions transformed part of his high school into a prototype for a community-based institution of higher education: an institution that would begin to provide some of the educational programs

traditionally experienced in the first two years of a four-year college or university. Inherent in this action was the creation of an environment in which articulation and transfer soon flourished (Witt et al., 1994).

McDowell's classic study of junior college education (1918) showed early signs of the likelihood of college transfer. Surveying 74 junior colleges, all connected to a high school or academy, he noted that nearly three-quarters of the students from public junior colleges went on to a university (p. 102). This was early evidence that the ability to transfer from a two-year college to a four-year college was in place, and that there was some semblance of a process that encouraged the transfer from the junior to the senior institution.

Even earlier, in 1907, the University of California at Berkeley (UCB) was encouraging California high schools with extended programs to provide college-level courses and to award certificates of completion for course work that was traditionally taken during the first two years at UCB. By the 1920s, the most popular junior college opportunity was that of college transfer. In recognition of this popularity, junior colleges began dovetailing their curricula with nearby state universities and incorporating university undergraduate courses into their programs of instruction (Witt et al., 1994).

As the century progressed, California's two-year college enrollments grew into the largest in America. In the early decades,

transfer was a relatively simple process, but by the end of the 1950s California's junior colleges had an enrollment of 300,000 students. Numbers of this magnitude simply overtaxed the transfer process.

Concern for this potential problem was voiced in the 1940's, when the leaders of California's junior colleges expressed growing concerns for assuring a smooth transition between junior and senior institutions. Recommendations were made for the adoption of a mutually understood transfer process, for policies governing transfer, for coordinating procedures, and for periodic evaluation of the progress of transfer students (Witt et al., 1994). These recommendations were eventually institutionalized in 1968, when the Master Plan for Higher Education in California formulated policies and procedures for intersegmental transfer.

According to Witt et al. (1994), in the 1920s, the American Council on Education (ACE) had adopted a set of standards that defined what a junior college was supposed to be. This document also dealt with articulation and transfer. ACE identified criteria that constituted graduation requirements, stating that the number of hours and credits should correspond to what was being required by colleges and universities for their freshmen and sophomores. In effect, this standard rationalized some of the procedural conflicts that had been bedeviling junior college transfer students and laid a foundation for formal articulation, providing an architecture for states to build upon.

California, initially in the forefront of articulation and transfer, was joined by Florida in 1947. This was the same year that the Truman Commission on Higher Education released its report recommending the establishment of a network of two-year institutions to be known as community colleges (Vaughan, 1995). Florida, acting upon this recommendation, formalized its public junior colleges by providing legislative recognition as community-based, publicly funded two-year colleges. But by the 1960s, articulation in Florida was generally ineffective. Decisions were being made inconsistently and irrationally, with transfer students finding themselves caught up in the frustrations of a bureaucratic obstacle course.

The situation, however, did not remain unheeded. Thanks to the growing number of success stories from students who had endured the transfer morass and still succeeded at the university, and to the grassroots pressure placed on legislators, the state's community college system and the state's university system finally joined hands. From this union in 1971 came the creation of statewide articulation, setting an example that would be followed by other states confronted by similar problems (Kintzer, 1982).

One of these states was the Commonwealth of Virginia. By the 1960s, Virginia found itself needing to regularize its junior colleges. By act of the General Assembly in 1964, the Commonwealth established a

system of statewide technical colleges. One of these colleges was the Northern Virginia Technical College, the predecessor of today's Northern Virginia Community College. Two years later, the General Assembly passed the Community College Act that transformed the technical colleges into comprehensive community colleges and placed them in a statewide system that was to be known as the Virginia Community College System (VCCS) (Witt et al., 1994).

The Governance of Articulation and Transfer

The pioneering efforts toward statewide articulation by California and Florida, as well as other influential states such as Illinois, provide different models on which to fashion the governance of articulation and transfer: centrally managed, such as Florida; governed by broad policy, such as California; or a combination of the two, as is the case in Virginia, whose policy is to bring about coordination and compliance between its public four-year universities and community colleges through the pressure of public funding. The end result of these models is to produce a process in which coordinated action can take place. Virginia achieves this coordination through two entities: the State Policy on Transfer (SPT) and the Joint Committee on Transfer Students (JCTS). The former, the SPT, provides broad policy guidance and implementing instructions, and establishes the infrastructure for facilitating transfer from the community college to the four-year university. The latter, the JCTS, is the body

charged with making recommendations to facilitate transfer as well as monitoring institutional policies that will foster improved transfer throughout the Commonwealth.

As stated in the SCHEV's 1997 State Policy on Transfer (SPT), the Commonwealth acknowledges college transfer as a matter of the highest interest and assumes a responsibility for providing transfer students with a fair access to a four-year education. This singular responsibility is further translated into a joint responsibility on the part of state-funded community colleges and public four-year universities. These institutions, in concert with each other, are obligated to make articulation a reciprocal process, with the assurance that transfer students and native students receive equitable treatment at senior colleges and universities. Moreover, to encourage continued cooperation, the Commonwealth promises to have a coherent statewide policy on transfer.

As a means of assessing its commitment to the quality of articulation and transfer, Virginia mandates that its senior public institutions track the progress of students who have transferred from a community college. For three years following transfer, until the transfer student has either graduated or withdrawn, the university gathers data (referred to as Guideline 8 assessment data) on its transfer students and shares the data with the originating community college. This exchange of information reinforces the mutual interest of both junior and senior

institutions by monitoring the progress of transfer students as they proceed through articulation and transfer.

Each year the SCHEV's JCTS publishes the *Transfer Connection*. Through this annual newsletter, the Joint Committee updates the status of articulation and provides a summary of its deliberations during the past year. The *Transfer Connection* provides current information to the cadre of Chief Transfer Officers located in the community colleges, public universities, and independent colleges. The 1997 edition of the *Transfer Connection* announced a plan to electronically transmit transfer information. By harnessing the power of information technology, community colleges and senior universities can publish their transfer guides on the Internet. These web pages, accessible to students, guidance counselors, and administrators, provide the most current information on articulation and on the mechanics of transfer.

GMU-NVCC Articulation and Transfer

The articulation and transfer relationship between George Mason University (GMU) and Northern Virginia Community College (NVCC) was established as an outgrowth of the common history shared by both institutions. Yet even as the relationship between the two institutions matured, particularly under the able leadership of NVCC's past-president Richard Ernst and GMU's past-president George Johnson, the coordination of articulation and transfer needed to be improved

periodically. To accomplish this, an inter-institutional articulation committee was established by joint action. Referred to as the Inter-Institutional Articulation Committee (IAC), this group meets in periodic working sessions throughout the year and conducts one general workshop annually. The committee is co-chaired by GMU's Vice Provost for Academic Affairs and NVCC's Dean of Academic and Student Services and has a membership representing the teaching faculty and guidance counselor constituencies of both institutions. These educators and administrators work to facilitate transfer between the two institutions and to make the structure of articulation as seamless as possible.

In support of the IAC, NVCC has organized a multi-campus articulation committee. This group, appointed by the college president and chaired by the Associate Dean for Curriculum and Enrollment Services, draws its membership from teaching faculty and guidance counselors. Charged with disseminating information on transfers to all of NVCC's five campuses and to clarify and/or resolve transfer issues in conflict, this committee deals with articulation to all universities and colleges that have an articulation agreement with NVCC, which includes some out-of-state institutions. The committee also explores ways to provide up-to-date information to potential transfer students. One way this is accomplished is through publishing a transfer web page on NVCC's Internet homepage site.

Central to the GMU-NVCC articulation and transfer relationship are two types of documents, the Master Articulation Agreement and the specific academic program guides. The Master Articulation Agreement, undated, reiterates the spirit of cooperation, acknowledges the transfer policies of both institutions, and provides broad guidance to potential transfer students in terms of general requirements for gaining admission into a specific programs of study at GMU. Recognizing that specific programs of study have unique admission requirements, each program of study has a guide that sets out the type of courses and the number of credits that must be earned at NVCC in order to be admitted into a GMU program at the third-year level while simultaneously meeting NVCC graduation requirements. For example, the program guide in Sociology, for those NVCC transfer students who want to major in Sociology at GMU and obtain a Bachelor of Arts degree in Sociology, recommends earning an Associate in Arts Degree while at NVCC, and accumulating 60 credits in a variety of liberal arts courses, to include six credits in the introductory course to Sociology. There are also requirements for two semesters of a laboratory science and six credits of mathematics.

Each program guide is designed to create a challenging and sufficiently rigorous preparation for the NVCC transfer student to meet the academic demands of GMU's upper level of undergraduate studies. As a complement to the Master Articulation Agreement and specific academic

program guides, GMU has published a Transfer Guide, undated, that reiterates broad policy and specific program requirements. While the Transfer Guide is applicable to all community college students who seek to transfer to GMU, it is a very useful document. As the figure on its cover denotes, it is a guide through the maze of college transfer.

In addition to the traditional printed documentation on articulation and transfer, both GMU and NVCC have Internet web sites devoted to articulation and transfer. Rich in content, these sites provide concise and timely information to potential transfer students, their parents and teachers, and transfer counselors, allowing them to stay abreast of the latest changes taking place in the arena of articulation and transfer.

Looking Ahead

In 1994, Arthur Cohen saw a rising trend in articulation and transfer, contending that this growth stemmed from budgetary cuts imposed upon public senior institutions, rising costs of higher education with austerity-minded community colleges better able to cope, and a growing population segment of college-bound youths. Dorothy Knoell (1990) saw the future of articulation and transfer in a slightly different context, as new opportunities arising out of the challenge to rationalize curriculum's connection to articulation, rather than to succumb to the twists and turns of academic program requirements. Knoell viewed greater collaboration as the key factor, collaboration among not only faculties and

institutions, but also involving business and industry. Knoell concluded that

> the success of the transfer function should not be judged by volume or rates of transfer but, instead, by movement toward a vision of the future in which individuals who have successfully completed two years of post-secondary education or its equivalent will have an appropriate opportunity to continue their education toward a higher degree (Rifkin, 1996)

While the trends of articulation and transfer, as seen by Cohen (1994) and Knoell (1990), seem positive, there are still uncertainties regarding the future of articulation and transfer. Among these concerns are the levels of public funding needed to support articulation and transfer, and the attitudes of educators and policy makers toward community colleges as an alternative to the first two years at a four-year university. One way to address these concerns and demonstrate the viability of articulation and transfer is through the exploration and demonstration of success achieved by community college transfer students upon completion of their undergraduate studies at a four-year institution. The following chapters of this research project will examine this question of success, measuring it by comparing the GPA performance of a population of NVCC transfer students with a population of GMU native students.

Chapter Five

Research Design and Methodology

This doctoral research project explores the academic success of Northern Virginia Community College (NVCC) students who transfer to George Mason University (GMU) in order to complete the necessary coursework toward earning a bachelor's degree. This study assesses the academic success of NVCC transfer students vis-à-vis their GMU native student counterparts. It also examines the influence of age, gender and race on academic success, and the impact of transfer shock.

Research Design

The problem underlying this research project stems from what I believe is a misconception: that community college students who transfer to a university are not as successful as native university students. Native students are university students who begin and complete their undergraduate education at a four-year college or university. Community college transfer students complete the first half of their undergraduate education, i.e. the equivalent of their freshman and sophomore years, at a two-year college prior to transferring to a four-year university for their junior and senior years.

A misperceived disparity in success between these two populations of students is often based on a number of assumptions. One is that community college transfer students lack academic readiness and commitment. This supposedly leads to difficulties in adjusting to the demands of a four-year university, and ultimately to lower rates of success.

Notwithstanding the evidence already offered by researchers such Menke (1980) and Slark and Bateman (1981), educators and policy makers still doubt that community college transfer students are ready to face the difficulties in adjusting to the university's academic environment. This doubt is founded on the presumption that community college transfer students do not have the same academic foundation and intellectual discipline that native university students have. With an early exposure to the challenge of the four-year university's classroom, university freshmen and sophomores are supposedly instilled with discipline, allowing them to build an early foundation of academic success. Community college transfer students, on the other hand, are supposedly not as challenged in their first two years of higher education, and hence, they have difficulty coping with the heightened academic demands of the university upper level.

One way to measure the ability to cope successfully with academic demands is through grade point performance. As the literature has shown,

grade point performance is an accepted factor for measure of academic success. The Grade Point Average (GPA) is used by counselors, boards of retention, and committees for scholarship continuance in evaluating student progress. Grade point performance often determines whether a student remains enrolled in college and/or retains scholarship support.

Grade point averages are also used to predict potential success. Although this study does not explore post-graduation success, the graduation GPA has been used as an indicator of future potential, as well as a measure of academic performance. Many employers and recruiters of newly graduated students look at the cumulative GPA as a measure of potential. Without previous work experience, the cumulative GPA serves as the only indicator of past achievement and future potential.

In the past, GPAs have been based on two different numerical systems: 1 through 4 and 1 through 5. In this study, all GPAs are based on the 1 through 4 numbering system that is used by most institutions of higher education. Given this common numeric base and high acceptability, the GPA as a statistical factor is both descriptive and discrete. Therefore, the use of the GPA as statistical measure is considered a valid approach to measuring the academic success of NVCC transfer students in this study.

Another factor in success is thought to be commitment and the persistence that reflects commitment. Although the question of persistence per se was not a stated objective of this study, some

inferences were drawn from the 1998 National Center for Education Statistics (NCES) report on persistence as a means of addressing relating the role of commitment in academic success. Persistence speaks to degree completion without a marked interruption in enrollment, an issue that according to Knoell (1990) does have a bearing on academic success. Persistence, as defined in the 1998 NCES report, is to remain enrolled in an undergraduate program of education without a stop out or stay out. Students who stopped out took a break of more than 4 months before re-enrolling; students who stayed out left school and did not return for five years.

The NCES report focused on a population of students from both two-year and four-year colleges who during 1989-1990 stopped out during the academic year or stayed out at the end of their first year of undergraduate education. The report found that two-thirds of the students who stayed enrolled through their first year of undergraduate education completed their degree requirements in five years. Only fifty percent of the students who did not finish their first year completed in five years.

Another approach to the question of academic discipline was to explore the possible effects of transfer shock. This phenomenon, recognized by Knoell and Medsker (1965), was shaped by the definition offered by Cejda (1997), who inferred transfer shock as *the change in pre- and post-transfer GPA* (p.283).

The approach to transfer shock in my study was to establish the extent to which transfer shock impacted success, first by identifying the presence of the pattern and then by ascertaining the extent of its impact on success. This was done by testing for significance difference between GPA performance of NVCC transfer students and GMU native students at the end of the first semester junior year (the end of the first semester at GMU for NVCC transfer students) and at the time of graduation from GMU. Any significant difference in grade point performance at either one or both nodes would signal the impact of transfer shock on success.

Hypothesis

The hypothesis of this study is that there is no significant difference in success between the graduating senior who has transferred from NVCC, and the graduating senior who has been a native GMU student. This null hypothesis would either reject or fail to reject the contention that there is a difference in academic success when comparing the graduation grade point average performance of NVCC transfer students and GMU native students.

Methodology

For this research, data was drawn from two populations of students GMU native students and NVCC transfer students. Additionally, data from the National Center for Educational Statistics (NCES) was used for comparison. Two sources of NCES data were used in particular: the study

Statistical Analysis Report: Baccalaureate and Beyond Longitudinal Study (hereafter referred to as the B&B Study) (1996), which surveyed 10,800 students one year after graduating from college in the academic years 1992-1993, and the report Stopouts or Stayouts? Undergraduates Who Leave College in Their First Year (1998), which examined persistence.

In the examination of the academic success of NVCC transfer students, age, gender, and race were established as the independent variables. Grade point performance at the time graduation from GMU, as the measure of academic success, was designated as the dependent variable. The relationship between the two student populations (GMU natives and NVCC transfers), the influence of the independent variables (age, gender, and race), and academic success (GMU graduation GPA) is shown in Figure 1.

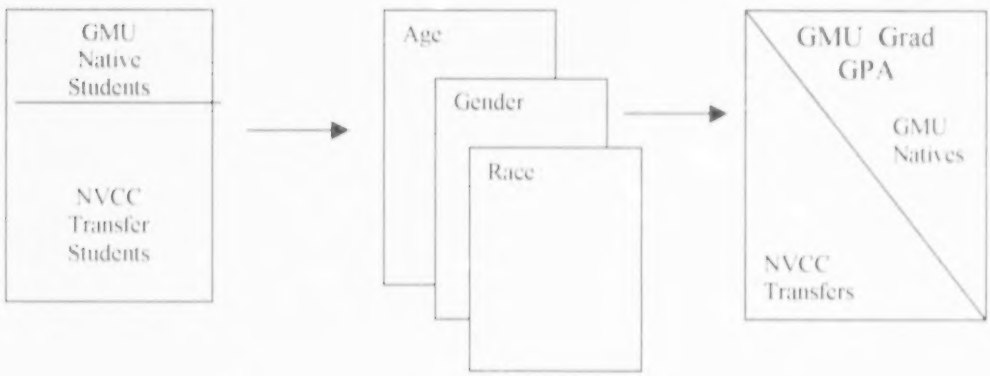

Figure 1. Variable Relationship

This study also explored transfer shock by examining the pattern of grade point performance of NVCC transfer students: from GPAs earned at NVCC prior to transfer, through the first semester, post-transfer GPA at GMU, and finally the GPA at the time of graduation from GMU. This pattern of differentiated grade point performance, first identified by Knoell and Medsker (1965), was examined to determine the extent to which transfer shock influenced the success of NVCC transfer students. Figure 2. shows the pattern of transfer shock, as nodes or comparative time points, corresponding to pre- and post-transfer as well as graduation from GMU.

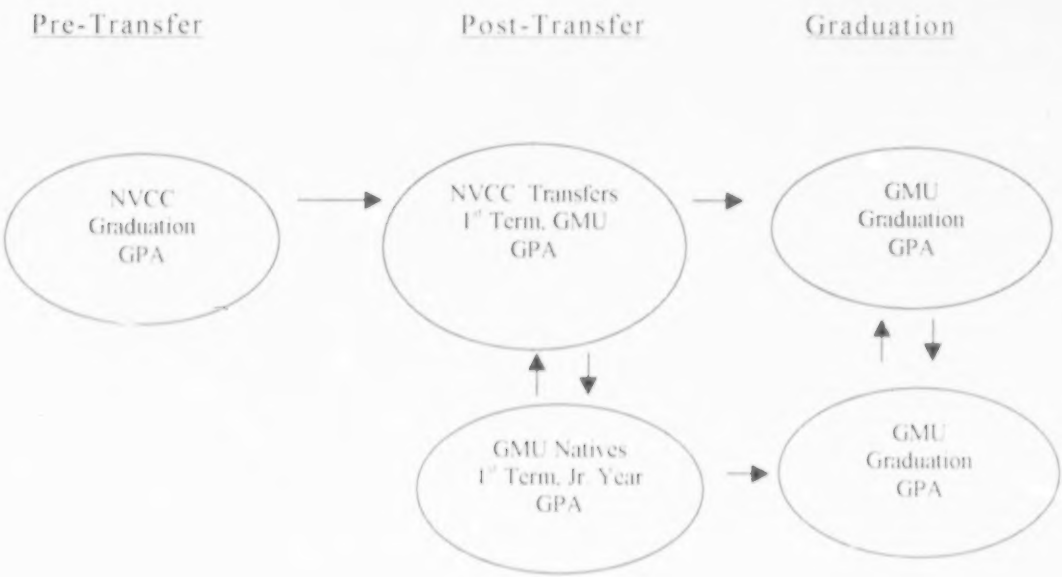

Figure 2. The Pattern of Transfer Shock

The data set for this study, spanning five academic years of experience, was derived from SCHEV-mandated Guideline 8 data. Each year, the State Council of Higher Education, Virginia initiates and conducts regular studies that report on a wide variety of topics, programs, and issues impacting Virginia higher education. SCHEV regularly collects and analyzes data regarding students, faculty, finances, libraries, facilities, and staff from colleges and universities throughout the Commonwealth of Virginia. Guideline 8 data, provided by Virginia's public institutions of higher education, form the basis for the above mentioned studies.

Guideline 8 data provided by NVCC's and GMU's respective Offices of Institutional Research, was merged into a single data set, using Students' Social Security numbers (SSNs) as a cross-reference. The identifying SSNs were then purged from the data set to ensure the privacy of those students involved in the study.

The data set was extracted from 2618 records of students who graduated from GMU with a bachelor's degree during the academic years 1993-1997. The specifics on this population of students and their records are discussed in the next section of this chapter. The pertinent elements of data taken from the student records and used in this study were: type of students, i.e. native or transfer, GMU graduation GPA, NVCC graduation GPA for transfer students, GPA at the end of the first junior year term for natives and first term after transfer for transfer students, age, as of the

last birthday prior to graduation from GMU, gender, and race, i.e. Black-American, Hispanic, Native-American, Asian-American, and White. In addition, a category of student referred to as Non-resident Alien was provided. These were foreign students who attended GMU in a non-U.S. resident status.

Not all of the above variables were numerically continuous. For statistical analysis, gender and race required recoding in order to be converted into numerical factors but are treated as nominal level data. For gender, males were recoded as 1 and females as 2. The races–White, Black-American, Asian-American, and Hispanic–were recoded 1 through 4, respectively. Native-American and Non-resident Alien were recoded as missing, i.e. eliminated from the data set, because of their statistical insignificance resulting from a small sample size.

GMU graduation honors, a derivative of the graduation GPA, provided another aspect of academic success. GMU graduation honors and their associated GPAs are: *cum laude* (3.50-3.69), *magna cum laude* (3.70-3.89), and *summa cum laude* (3.90-4.00).

Data Design

In analyzing the variables, the composition of the two populations of students central to this study and the nature of each independent variable were considered. Interrelationships were analyzed by: (1) cross-tabulating the independent variables with the graduation GPA, (2) testing

the null hypothesis, i.e. the statistical significance of the mean graduation GPA, (3) conducting a regression analysis of the variables, and (4) assessing the impact of transfer shock and the inferences of persistence on success. Stata 6, a statistical software program, was used throughout this study to perform the quantitative analysis.

The population used in this study consisted of 2618 students: 2057 native GMU students and 561 NVCC transfer students who graduated from GMU with a bachelor's degree during the years 1993-1997. The admission policy and its associated requirements for transfer students remained the same throughout the five-year period. The 2618 students were not the total number of undergraduate students who graduated from GMU during the five-year period. Not included in the data provided by GMU's Office of Institutional Research were transfer students from community colleges other than NVCC, transfer students from other four-year universities, and any student whose records were incomplete, i.e. missing the data elements relevant to this study. No count was kept of the records with missing data. Nevertheless, the sample size of both student groups was considered sufficient for statistical purposes.

Mean and median ages were compared within each of two population groups. The mean age of each of the population groups, organized into ranges, was also compared with age data from the NCES B&B Study. Gender was compared as a percent of males and females.

within each of the population groupings. These percents were also compared with those provided in the NCES B&B Study. Race was compared as a percent of White, Black-American, Asian-American, and Hispanic students in each of the student populations. The percent of race by the same racial categories was also compared with the NCES B&B Study.

The dependent variable, the mean grade point average at the time of graduation from GMU, was compared within each population group as well as with the native and transfer students in Knoell and Medsker's 1965 study. Also, the mean graduation GPA of all students in the NCES B&B Study was provided as an additional point of comparison. Honors, equating to ranges of graduation GPA, were cross-tabulated by the numerical distribution of the type of honors awarded within each of the two GMU population groups, and as a percent of honors awarded to each of the population groups.

The relationship of the mean graduation GPA to the variables of age, gender and race was explored in a series of comparisons between the two populations and with data from the NCES B&B Study. Age was organized into ranges and related to the mean graduation GPA. Gender was cross-tabulated by graduation GPA with each of the population groups, and was compared with similar data in the NCES B&B Study. The mean graduation GPA by race was shown by each of the four racial

groupings within the population of native and transfer students. Data from the NCES B&B Study, giving GPA by race as a percent of three ranges of cumulative GPA, was also presented.

The test to either accept or reject the null hypothesis was conducted by using the *t* test technique of measuring the variance of means in two samples. In this case, the samples were the graduation GPAs of GMU natives and NVCC transfer students. Testing for significance also took into consideration that the statistical distribution of means, e.g. the mean graduation GPAs, could be either equally or unequally distrib ed among all means in the sample. Because of this uncertainty, two tests were conducted: one assuming equal variance, the other assuming unequal variance. In effect, this dual testing provided a greater measure of reliability for accepting or rejecting the null hypothesis.

Transfer shock was explored through a series of comparisons of nodal grade point performance, examining the mean GPAs of NVCC transfer students at pre-transfer, post-transfer, and graduation from GMU. The first node contained the cumulative GPA for transfer students at the time of their completing their two years at NVCC. Together with mean GPAs from the other two nodes, these scores formed the pattern of grade point performance that Knoell and Medsker (1965) associated with potential transfer shock.

Tests for variance in grade point performance were conducted at the second and third nodes. The second node corresponded to GMU natives' end of the first semester, junior year, and to NVCC transfer students' completion of their first semester at GMU. The third node contained the GMU graduation GPAs for both native and transfer students. This latter test was identical to the test of the null hypothesis.

The significance in the variance of mean GPA scores at the junior year and graduation nodes provided an assessment of the initial impact of transfer shock. A significant difference between the junior year GPA of transfer students and the GPA of their native counterparts could indicate that the recovery from this comparative deficit might be problematic in achieving academic success. If, however, the difference in grade point performance by NVCC transfer students at the end of their first semester was not significant relative to their GMU native counterparts, there might not be any residual effects.

If there were no significant difference in GPA performance at both the junior year and graduation nodes, transfer shock could be an anomaly and less a factor in academic success. If, on the other hand, the junior year node showed no significant difference but there was a significant difference in grade point performance at the time of graduation, this might indicate an erosion of initial success. One explanation for this occurring might be that NVCC transfer students, denied the discipline of a

university environment, were not able to sustain academic success to the time of graduation from GMU.

As previously mentioned, persistence and its influence was examined indirectly. By using age, a factor in both this study and the NCES report on persistence, an inference was drawn as to the consequence of persistence and its impact on academic success. The ages of the population of university and community college students in the NCES report relative to rates of stop-out/stay-out was compared to the population of GMU natives and NVCC transfer students. From this comparison came a sense of the persistence by both GMU native students and NVCC transfer students. By comparing this sense with actual grade point performance, some light could be cast on the commitment of NVCC transfer students to stay enrolled and complete required coursework to earn a bachelor's degree.

Regression analysis was used to indicate the extent to which age, gender, and race explain variation in graduation GPA relative to the influence of these independent variables. By examining the percent of variation, i.e. how much of the variation in GPAs was explained by the interaction of age, gender, and race, an assessment could be made as to the influence of these variables on academic success.

High percentages of variation explained by age, gender, and race would indicate that these factors exert a significant impact on academic

success. Low percentages of variation, on the other hand, would suggest that other variables besides age, gender, and race greatly influence academic success. While the identity of these other factors of influence would not be revealed by regression analysis, the literature might suggest other important factors.

The final step in the analysis was to test the relative effects of age, gender, and race of NVCC transfer students on their GMU graduation GPA. By using multi-variant regression analysis, this inquiry allowed for the possibility that any one of the independent variables may exert a singular influence on the graduation GPA. If a dominant variable(s) did emerge, controlling for the independent variable(s) would yield a more definitive analysis of the impact on the less dominant variable(s).

Chapter Six

Analysis and Discussion

Population

The analysis and discussion of Northern Virginia Community College (NVCC) transfer students and their academic success begins with an examination of the population. Table 1 shows the populations of George Mason University (GMU) native students and NVCC transfers as a percent of their total population.

Table 1. Study Population

	Total	%
GMU Natives	2057	78.57
NVCC Transfers	561	21.43

Note. This population includes all GMU native and NVCC transfer students who graduated from GMU with a bachelor's degree during the spring of the academic years 1993-1997, and who had complete data records.

The first of the three demographic variables to be examined is that of age. Table 2 shows the mean and median age of the two populations of students at the time of graduation from GMU.

Table 2 Age at Graduation from GMU

	Mean	Median
GMU Natives	24.63	25.00
NVCC Transfers	32.89	30.00

The variation between mean and median age the among NVCC transfer students is greater than that among GMU native students. As seen in Table 3 , this is attributed to the number of NVCC transfer students (54%) who graduated from GMU at 30 years of age or older.

Table 3 compares age of the two populations of students by age range, arraying the data by actual number of students in each of the sub-populations and as percent of the sub-population. It also compares age, by percent, with the 1996 NCES Statistical Analysis Report Baccalaureate and Beyond Longitudinal Study (hereafter referred to as the B&B Study).

Table 3 Comparative Ages at Graduation

Age Ranges, in Years	GMU Natives	NVCC Transfers	NCES B&B Study
Less than 23	18 (8%)	0 (0%)	47%
23-24	1680 (81.6%)	9 (1.6%)	25%
25-29	345 (16.7%)	248 (44.2%)	12%
30-39	12 (5%)	217 (38.6%)	10%
Over 40	2 (09%)	87 (15.5%)	6%
Total	2057	561	100%

Most of the GMU natives in this study (81.6%) graduated from GMU between 23 and 24 years of age while most NVCC transfer students (82.8%) graduated from GMU between 25 and 39 years of age. The NCES B&B Study shows a more traditional pattern of age at the time of graduation. About half of the B&B Study graduates were 22 years or younger, and about one-quarter were 23-24 years of age.

The relative maturity of the GMU general population, particularly among the NVCC transfer students, may reflect on the nature of the two institutions. Both GMU and NVCC are public institutions serving a constituency of students who reside in the local area, a suburban complex that encourages concurrent employment and higher education.

Although the question of persistence was not a stated objective of this study, it does provide a perspective into the question of age and its relation to success. The NCES report on persistence, Stopouts and Stayouts? Undergraduates Who Leave College in Their First Year (1998), focused on a population of students who stopped-out or stayed-out at the end of their first year of undergraduate education during the academic year 1989-1990. Students who stopped-out took a break of more than 4 months before re-enrolling; students who stayed-out left school and did not return for five years. Table 4 shows the percent of these students who stopped-out and stayed-out, by age within ranges, and by the institution initially enrolled.

Table 4 Stopout and Stayout A Reflection of Persistence

(NCES Students)

Age	University (Stopout/Stayout) (%)	Community College (Stopout/Stayout) (%)
18 or younger	64.4/40.3	38.7/24.3
19-23	30.3/35.5	42.7/36.6
24-29	2.9/9.0	8.5/13.3
30 or older	2.5/15.2	10.2/25.7

Rates of stayout and stopout are more pronounced at a younger age for both university and community college students, particularly at 23 years of age and below. The median ages for GMU native and NVCC transfer students were 25 and 30 years, respectively, at the time of graduation from GMU. Adjusting age backward to correspond with the age during first year at the university, GMU natives fall into the NCES range for university students of 23-24 years and NVCC transfer students fall into the range of 24-29 years. NVCC transfer students may be potentially more persistent, once they have transferred to GMU, than GMU natives during their first year at GMU.

Table 5 provides the gender composition of this study, as a percent of each of the two sub-populations of students. It also compares the gender distribution of the entire population with the NCES B&B Study

Table 5 Population by Gender

	Male	%	Female	%
GMU Natives	758	36.84	1299	63.15
NVCC Transfers	224	39.92	337	60.07
Total/Avg %	982	37.50	1636	62.49
NCES B&B Study		45.3		54.7

The percent of population by gender found in this study, 62.5% for females and 37.5% for males, is different from that found in the NCES study (54.7% for females and 45.3% for males). This difference may suggest that more women in this study are seeking higher education than men, perhaps as a means of attenuating gender inequality, particularly in the workplace.

Table 6 contains the distribution of race, as a percent of each sub-population, and as percent of the entire population. It also compares race with the NCES B&B Study.

Table 6 Graduates by Race

	White	%	Black-American	%	Asian-American	%	Hispanic	%
GMU Natives	1397	66.09	109	5.30	408	19.87	116	5.65
NVCC Transfers	393	70.55	29	5.20	99	17.77	35	6.28
Total	1790	68.4	138	5.3	507	19.4	151	5.8
NCES B&B Study		83.3		6.1		4.9		5.1

The proportionality of race in this study differs from the NCES B&B Study. While the difference between the percent of Black Americans and Hispanics is not great, there is a sizable difference between White and Asian-American students. The lower White percentage and the higher Asian-American percentage in this study as compared to the NCES B&B Study reflects the cultural diversity of the Northern Virginia regional area.

The Grade Point Average

The grade point average is the key variable in this study. Tables 7 through 13 compare the mean graduation GPA across the demographic spectrum of age, gender, and race. Comparisons are also made with similar data in the NCES B&B Study, which refers to the graduation GPA as the cumulative GPA, and with GPA data from Knoell and Medsker's (1965) study. This research study, as well as the other two studies, uses the same basis for constructing the GPA.

Table 7 arrays the mean graduation GPA for GMU natives and NVCC transfer students. It also compares the GMU mean graduation GPA with the NCES B&B Study's average cumulative GPA for all students, and with Knoell and Medsker's mean graduation GPAs.

Table 7 Mean Graduation GPAs

	GMU Graduation GPA	NCES B&B Study	Knoell Medsker
Natives	3.08	-	2.88
Transfers	3.09	-	2.68
All Students	3.08	3.17	

There is no significant difference in mean graduation GPA between GMU natives and NVCC transfer students. The higher GPA performance for both GMU natives and NVCC transfers, relative to the GPAs in Knoell and Medsker's study, suggests that grade inflation has incurred in the ensuing 35 years.

Table 8 shows the number of graduation honors, with associated GPAs, conferred upon both sub-populations of students, and as a percentage of total honors within each sub-population.

Table 8 Honors

	Cum Laude (3.50-3.69)	*Magna Cum Laude* (3.70-3.89)	*Summa Cum Laude* (3.90-4.00)	Total	% Honors
GMU Natives	172	113	44	329	17.45
NVCC Transfers	39	33	23	95	16.93

The percent of graduation honors conferred upon both populations of students is not significantly different. The lack of significance in the percent of honors suggests that there is parity in levels of scholarship and academic success attained by GMU natives and NVCC transfer students at

the time of graduation from GMU. The NCES B&B Study provided no comparative data on honors.

Table 9 provides GMU mean graduation GPAs as a function of age, organized into age ranges.

Table 9. Mean GMU Graduation GPA by Age

Age Ranges	Natives	Transfers
Under 23	3.46	-
23-24	3.08	3.40
25-29	3.03	2.92
30-39	3.17	3.14
Over 40	3.37	3.45

The pattern of graduation GPAs for both sub-populations follows a similar progression. GMU native students under 23 years of age and NVCC transfer students 23-24 years of age achieve high graduation GPAs. The recovery in progression of higher graduation GPA at 30 years and over suggests that age may have bearing on success as measured by the graduation GPA.

Table 10 shows the NCES B&B Study data of GPA relative to age. Rather than using GPAs within age ranges, the B&B Study provided the percent of the population within age categories that achieved cumulative GPAs expressed in three levels of achievement.

Table 10. NCES *B&B Study* Cumulative GPA as a Percent of the Population within Age Ranges

Cumulative GPA	Under 23	23-24	25-29	30-39	Over 40
Less than 3.00	42.4	33.5	15.0	7.1	2.0
3.00-3.49	50.8	24.9	11.6	7.7	5.0
3.50 & Higher	46.6	14.5	11.3	16.7	11.0

Cumulative GPAs of 3.00 and higher are achieved by greater percents of the population in all age groups. But older graduates were more represented among those with higher grades. Nearly 17% of those students 30-39 years of age had higher cumulative GPAs of 3.50 and over. This is in comparison to the percent of those students of the same age range, about 7-8% of that population, who earned cumulative GPAs less than 3.50. The same holds true of graduates 40 years or older. Eleven percent of these students had cumulative GPAs of 3.50 and over versus 2-5% who achieved cumulative GPAs less than 3.5. This is in contrast to the youngest age group, under 23 years of age, where the percent distribution among the three levels of cumulative GPA performance was not dramatic, with almost as many graduates achieving cumulative GPAs of 3.5 or higher versus cumulative GPAs less than 3.50. This suggests something similar to the findings from Table 9., that age does have a bearing on GPA performance, regardless of whether the student is a native or transfer.

Table 11. shows the GMU mean graduation GPA for each sub-population of students by gender. It also compares this GPA performance with the cumulative GPAs found in the NCES B&B Study.

Table 11. Mean GMU Graduation GPA by Gender

	F	M
Natives	3.10	3.04
Transfers	3.15	3.00
NCES B&B Study	3.24	3.10

Graduation GPAs by gender for both GMU populations are lower than the cumulative GPAs for the NCES population. But there is a consistency in the gender and GPA relationship in both studies: females outperform males in GPA performance.

The relationship of race to the mean graduation GPA is seen in Table 12. This table shows the relationship between mean graduation GPAs by race within each of sub-population of students.

Table 12. Mean GMU Graduation GPA by Race

	W	BA	AA	H
Natives	3.11	2.84	3.04	3.00
Transfers	3.13	2.97	3.00	3.02

Among the GMU population, White students achieved higher graduation GPAs than Black-Americans, Asian-Americans, and Hispanics. The NCES B&B Study did not provide direct comparative data. Table 13.

shows the percent of graduates within each of four racial categories by three levels of cumulative GPA.

Table 13. NCES *B&B Study*: Race, as a Percent of Population within Cumulative GPA Ranges

Cumulative GPA	W	BA	AA	H
Less than 3.00	77.5	11.3	4.6	6.2
3.00-3.49	83.9	5.0	5.7	4.9
Greater than 3.50	89.4	2.4	3.7	3.8

While White students were fairly well-distributed among the two ranges of cumulative GPAs of 3.00 and over, Asian-American graduates had a higher representation in the range of 3.00-3.49 than in the range of greater than 3.50. Of the four racial groups, Black-American graduates achieved higher proportions of cumulative GPAs under 3.00. There was a similar pattern among Hispanic graduates, but not as pronounced as Black-American graduates.

Testing the Null Hypothesis

Tables 14. and 15. show the results of two tests using the *t* test technique of measuring the variance of means in two samples. One test assumed equal variance and the other unequal variance. This dual testing provided a greater measure of reliability upon which to reject or fail to reject the null hypothesis.

Table 14. Test of Mean GMU Graduation GPA, Assumed Equal Variance

	Mean Graduation GPA	Standard Error	Standard Deviation
Natives	3.08	.008	.388
Transfers	3.09	.019	.467
Difference	0.01		

Note. t=.866 95% Confidence Interval=3.06-3.10

The t value of .866 indicates a very low variance in the means of the graduation GPAs in both sub-populations of students. Since the means of both samples are within the 95% Confidence Interval and fall within less than one Standard Error, there is strong evidence not to reject the null hypothesis. But the difference in standard deviation suggests that there is unequal variance. Consequently, as seen in Table 15, a second test was conducted based on assumed unequal variance.

Table 15. Test of Mean GMU Graduation GPA, Assumed Unequal Variance

	Mean Graduation GPA	Standard Error	Standard Deviation
Natives	3.08	.008	.388
Transfers	3.09	.019	.467
Difference	0.01		

Note. t=.780 95% Confidence Interval=3.06-3.10

Under an assumed unequal variance, the t value of .780 reflects a very low variance, with Confidence Interval and Standard Error remaining the same as shown in Table 14. Thus the null hypothesis fails rejection under both tests, indicating no significant difference in graduation grade

point performance between GMU natives and NVCC transfer students.

Measuring Transfer Shock

To identify and measure transfer shock and its influence on the success of NVCC transfers students, a series of analyses were conducted relative to the GPA performance of NVCC transfer students at three nodes. The first node coincided with the pre-transfer node and its associated NVCC GPA; the second node was at post-transfer, associated with the GPA of the end of first term at GMU; and the third node was at the point of graduation from GMU.

Once the pattern of transfer shock, i.e. the drop and recovery of GPA, was confirmed, analyses were made. Table 16. arrays the mean GPA performance across three nodes for NVCC transfer students and two nodes for GMU native students. It also compares GPA performance with that of Knoell and Medsker (1965).

Table 16. Mean GPA at Three Nodes

	Node 1.	Node 2.	Node 3.	Difference
	NVCC (2 Year College) Graduation GPA	GMU (4 Year University) Junior GPA	GMU (4 Year University) Graduation GPA	
Natives	-	2.99	3.08	+.09
Transfers	3.13	2.95	3.09	-.18 / +.14
Knoell & Medsker	2.92	2.56	2.68	-.36 / +.12

The pattern of GPA performance for NVCC transfer students does not reveal the full extent of transfer shock, similar to that identified by Knoell and Medsker. The drop in GPA performance between Nodes 1. and 2. is significantly less for NVCC transfer students than the drop for Knoell and Medsker's junior college students. Moreover, as seen in Tables 17. and 18., there was no significant difference in first semester, junior year GPAs between GMU natives and NVCC transfers students at Node 2.

Table 17. Test of Mean GPA, Node 2. with Assumed Equal Variance

	Mean GPA	Standard Error	Standard Deviation
Natives	2.99	.014	.637
Transfers	2.95	.031	.745
Difference	0.04		

Note. t=1.05 95% Confidence Interval= 2.95-3.01

The t value indicates that there is significance difference in mean GPA performance by NVCC transfer students in comparison to GMU natives. This difference suggests that NVCC transfer students have been impacted by transfer shock and may have a deficit in GPA performance that could eventually affect their success at the time of graduation.

But, since there is a difference in standard deviations, a second test was made, with assumed unequal variance, as shown in Table 18.

Table 18. Test of Mean GPA, Node 2, with Assumed Unequal Variance

	Mean Junior GPA	Standard Error	Standard Deviation
Natives	2.99	.014	.637
Transfers	2.95	.031	.745
Difference	0.04		

Note. t=.096 95% Confidence Interval=2.95-3.01

The t value of .096 indicates a very low variance in the means of the graduation GPAs in both sample populations at Node 2. With the means of both samples falling within the 95% Confidence Interval and within less than one Standard Error, there is strong evidence that this test is more valid. The lack of significance between mean GPA performance at both Nodes 2 and 3 indicates that transfer shock has no significant impact on success.

While transfer shock failed to materialize, there was a downward turn in grade point performance at the end of the first semester, junior year. It was originally thought that this "Junior Year Slump" might be influenced by age, with the maturity of age dampening the effects of the downturn in GPAs. Table 19. shows the results of cross-tabulating the two student sub-populations' Node 2. GPA performance within age ranges.

Table 19. Node 2. GPAs by Age

	Less than 23	23-24	25-29	30-39	Over 40	All Ages
GMU Natives	3.47	3.01	2.88	2.84	3.56	2.99
NVCC Transfers	-	3.43	2.70	3.05	3.40	2.95

NVCC transfer students who are between the ages of 25 and 29 are more susceptible to a decline in grade point performance at the end of their first semester at GMU. Their mean GPA of 2.70 is lower than the mean GPA of 2.95 for all NVCC transfer students at Node 2. This segment of the NVCC transfer student population may be at risk, given the GPA deficit relative to the mean graduation GPA that they must overcome to be successful at GMU.

Guidance counselors and advisors should be alert to transfer students who fall within this age range. Family responsibilities and work demands may be partial explanations. Clearly, this important piece of information demands further research.

Regression Analysis

The regression analysis used in this study is a multi-variant approach to examining the association of variables. Table 20. shows the result of regression analysis, with the graduation GPA as the dependent variable, and age, gender, and race as the independent variables.

Table 20. Influence of Age, Gender, and Race on the Graduation GPA

Variables	Coefficient	Standard Error	aR^2
Age	.041	.009	
Gender	.080	.016	
Race	.055	.031	
			.03

Age, gender, race, and age have a positive correlation with the graduation GPA. But the adjusted R^2 of .03 indicates that only 3% of the variation in graduation GPA is attributed to age, gender, and race.

Controlling for the variable of age, as seen in Table 21., there was no appreciable difference in association. The adjusted R^2 of .029 indicates that gender and race explain only 2.9% of the variation in graduation GPA.

Table 21. Influence of Gender and Race on the Graduation GPA

Variables	Coefficient	Standard Error	aR^2
Gender	.078	.016	
Race	.054	.027	
			.029

While age was the dominant influence, collectively age, gender, and race fail to account for any significant variation in graduation GPA. This points to the probability that there are other factors that influence academic success.

Persistence, as manifestation of commitment and discipline, may likely be one of those factors. But as the literature suggests, there are other factors that exert some degree of influence. Among them are earning an associate's degree as opposed to transferring with the requisite number of credits, demonstrating another facet of discipline and commitment.

Also, socioeconomic indicators such as family income status and education level may help predict academic success.

These unanswered questions show that academic success by community college transfer students at the time of graduating from a four-year university is a complex issue. The conclusions and findings of this study bear on some of the important aspects of college transfer and academic success. However, there is more to the question of college transfer and academic success, as this study surfaced but was unable to address. These unanswered questions, which will be addressed in the final chapter, present potential areas of continuing research in order to understand the full range of issues that confront academic success associated with articulation and transfer.

Chapter Seven

"Those who do not remember the past are condemned to repeat it."

George Santayana

Ends and Beginnings

Summation

This doctoral research began with two objectives: an inquiry into a facet of articulation and transfer that addressed academic success associated with college transfer, and the contribution to the body of knowledge on articulation and transfer. While these two objectives have been met, questions have surfaced that remain open and must be left for other scholars to answer. Nevertheless, by examining the experience of 561 Northern Virginia Community College (NVCC) students who transferred to George Mason University (GMU) during the academic years 1993-1997, I have illuminated the nature of articulation and transfer between two institutions of higher learning that have shared common history and a common pattern of development.

Conclusions

The principle finding of this study is that Northern Virginia Community College transfer students achieved academic success at

George Mason University, on par with their native student counterparts. Moreover, they suffered no transfer shock. This latter finding not only attests to the preparedness and motivation of transfer students, but also refutes the conventional belief that community college transfer students, as portrayed by Bernstein (1986), are not academically ready to deal with the demands of a four-year university. The lack of any significant difference in GPA between NVCC transfer students and GMU natives at both the end of the first semester of their junior year, and at graduation from GMU contradicts the common belief that community college transfer students lack preparation for the post-transfer challenges of a university's undergraduate degree program. In fact, the number of GMU graduation honors bestowed upon NVCC transfer students relative to GMU native students further indicates that community college transfer students can excel at a four-year university.

The discipline and commitment to success found in today's community college transfer students can be further demonstrated by comparing the success of the NVCC transfer students with those students in Knoell and Medsker's study (1965). The NVCC transfer students in this 1993-1997 study achieved a graduation grade point performance 13% higher than their earlier counterparts. This is a remarkable difference, even supposing some inflation in GPA is factored in. Moreover, across the intervening 35 years, the 13% increase in GPA by two-year college

transfer students is even more dramatic considering that GMU natives in this study achieved graduation GPA's only 6.5% higher than those native university students Knoell and Medsker studied.

One of the telling findings in this study was the non-existence of transfer shock. The drop in grade point performance between the time of graduation from NVCC and the end of the first semester at GMU proved to be not significant when compared to the GPA of the GMU natives at the end of their first semester junior year. The fact GMU natives showed measurable improvement in their graduation GPA relative to the first semester junior year might merely reflect a recovery from "Junior Year Slump."

While the NVCC transfer students in this study proved to be academically competitive with their GMU colleagues as measured by graduation grade point performance, the influence of age, gender, and race on success was less conclusive. In general, the notion that age and maturity contribute to success was a factor that applied equally to NVCC transfer students and GMU native graduates. NVCC transfer students, as a population, were slightly older than GMU natives. But there was some evidence that age and maturity also accrued to older GMU natives, albeit a small group. They outperformed their younger colleagues, particularly at the end of the junior year. However, this may be merely an indication of the effect age and maturity exert on overcoming "Junior Year Slump."

The end of the first semester of the junior year is a very critical juncture in undergraduate education for community college transfer students. The supposition that age and maturity affect transfer students at this juncture of undergraduate education is true in the aggregate, but not among all age groups. Perhaps younger transfer students adjust faster to the change in academic environment. The higher GPAs achieved by NVCC transfer students 23-24 years old, relative to the GMU natives of the same age group, at the end of their first semester at GMU point in this direction.

My analysis indicated that there was no significant difference in GPA at the end of the junior year. Dr. Douglass Schocke, a member of my doctoral project committee, confirmed this in an independent test. But he did find that, in comparing the two groups in the age range 25-29 years, there was a significant difference in mean GPA at the end of the junior year. This must be tempered, however, by the fact that only 16.7% (354 students) of the GMU natives and 44.2% (248) of the NVCC transfer students resided in this age group.

Gender proved to be more consistent in its relationship to grade point performance, but not to a conclusive extent. Women outnumbered men, 60.1% for NVCC transfer students and 63.15% for GMU natives. This is in comparison with the NCES B&B Study where women made up 54.7% of the population. This sizable presence of women takes on a

greater importance when graduation GPA's are taken into consideration. Women outperformed men by considerable margins, both in this and the NCES B&B Study.

Race, as an influence on academic success, was as equivocal as age and gender. The distribution by race among both GMU natives and NVCC transfer students was fairly similar. However, when comparing the GMU graduates with those in the B&B Study, there were two exception dissimilarities. The B&B Study showed a significantly higher percent of White students, 83.3% versus 68.4% among the GMU graduates. Asian-American students made-up one-fifth of the total GMU population versus 4.9% found in the B&B Study population.

While the graduation GPAs of Asian-Americans, 3.00 for NVCC transfers and 3.04 for GMU natives, were the highest among the minority groups in this study, no conclusion could be drawn as to the influence of cultural diversity on academic success. In fact, considering that 70.5% of the total NVCC transfer student population was White, with an average graduation GPA of 3.13 versus an average graduation GPA of 2.99 for minority transfer students, cultural diversity did not generate any broad impact on the prospect of success. However, the one specific factor in this study that drew attention to the relationship between race and academic success was seen in the grade point performance of Black-American transfer students. Their average graduation grade point performance for

both Black-American transfer students and university natives was 3.00. Yet Black-American NVCC transfer students, with an average GPA of 2.97, were more successful than Black-American GMU native students, who earned an average graduation GPA of 2.84. Still the fact remains that Black-American transfer students earned lower graduation GPAs than all other students in this study.

Does this raise the question that Black-American community college transfer students are an at-risk group, and that the policies of articulation and transfer need to address this issue? While Black-American NVCC transfer students outperformed their GMU native counterparts, they underperformed in relation to all other transfer students, particularly in regards to White transfer students. But to state that the results of this study indicate that Black-American transfer students are an at-risk population cannot be done conclusively.

With only 3% of the variation in graduation grade point average attributable to age, gender, and race, there must be other influences that are being exerted upon graduation grade point performance. One possible explanation may be found in the influence of transferring with an earned associate's degree versus a requisite number of credits. On the one hand, an associate's degree demands a sense of discipline from the potential transfer student, thereby demonstrating a readiness to meet the challenge of a post-transfer program of instruction. On the other hand, an earned

associate's degree for those transferring to a four-year university may be superfluous. If a requisite number of credits are sufficient to satisfy entry into an upper level of undergraduate studies and academic success can be achieved at the time of graduation, this may be the more cost-effective approach to this aspect of articulation and transfer.

An approach to resolving the relative merits of transferring with an earned associate's degree would be to examine grade point performance at the end of the immediate post-transfer semester and at the time of graduation from the four-year university. Data was not provided to undertake this particular analysis as part of this study. Still, this issue of articulation and transfer requirements is sufficiently important to consider further exploration.

Images Revisited

Do the results of this study sharpen the sociological and pedagogical images of community college transfer students? While the pedagogical imagery has been made a bit sharper, the sociological image remains blurred. Pedagogically speaking, the image of NVCC transfer students and their success at GMU demonstrates that community college students are ready and able to compete academically with their native university counterparts. Moreover, the absence of transfer shock further attests to the readiness of community college students. Edmund Gleazer (1980) noted almost twenty years ago that the major concern remains one

of assessing how well community college transfer students are prepared for the four-year university. Given that most community colleges, including NVCC, have open enrollment, the intake of students is made without assessment of their potential to succeed. One way to allay this concern would be to eliminate the open enrollment for transfer students and adopt some form of admission test such as the SAT or ACT as an early assessment tool. But this would be in contradiction to the mission of the community college as democracy's open door to higher education. I believe the soundest solution to assessment would be to institutionalize the effort to track the progress of transfer students, from the time of enrollment in the community college to the time even beyond graduation from a four-year university.

Periodically, GMU's Office of Institutional Assessment surveys graduates on various undergraduate experiences and how these experiences have affected post-graduation endeavors. By extending the examination of success beyond graduation, academic success can be amplified by factors such the attainment of career goals, job satisfaction, economic rewards, socioeconomic factors such as managerial status as a reflection of prestige, and the acceptance into a graduate or professional program of education.

The sociological image, and whether college transfer success reflects a functional or conflict perspective, remains debatable. This study

argues in favor of functionalism. I believe that open admission to the community college is not a means of placating marginalized students. It is a portal into higher education such that at the far end, i.e. graduation from the university, success can be achieved. Yet I doubt that social conflict advocates will be convinced by this study that transfer students can be consistently successful. There are educators, legislators and policy makers who cling to the notion that college transfer is not potentially empowering; that it is no more than a token acquiescence to the granting of greater social power. They will continue to argue that transferring from a public two-year college to a public four-year college, regardless of success, is merely a sop to the collective consciousness, with no attached social enhancement.

The fact remains that, from a functional perspective, post-transfer success may well provide a potential for success beyond the institution of higher education, stretching into the private and public sectors of commerce, government and education. I believe that, by meeting the pedagogical challenge, transfer students are also overcoming some of the sociological challenges. The fact that success empowers can not be discounted. When success begets success, it is a powerful point of persuasion. Access to higher education, even through the less traditional route of college transfer, does make an argument favoring the function and structure of the institution of higher eduction. In today's world, and

into the foreseeable future, the rigid construction of higher education into spheres of social separation may remain, but will continue to be less relevant.

A Call for Continuing Action

While I have probed some of the dimensions of articulation and transfer, particularly success attached to the latter, much territory remains to be explored. It is to this end that I encourage other researchers to pursue these open-ended questions, and educators, administrators, and policy makers to support these endeavors. The quest for information and insights into the nature of the community college and into articulation and transfer must continue. At the institutional level, members of the GMU-NVCC Inter-Institutional Articulation Committee should be encouraged by the academic success of the NVCC transfer students at GMU. This attests to the generally successful state of articulation between the two institutions.

Notwithstanding the above, the quest for continued improvement in the articulation relationship between NVCC and GMU may be well served by exploring issues such as the influence of an earned associate's degree on post-transfer success. Two New York colleges, Orange County Community College and Mount Saint Mary College, stipulate in their articulation agreement that an associate's degree is a requirement for

transfer. Should an earned associate's degree be a universal prerequisite for all community college transfer students?

This question of academic success and its relationship to an earned associate's degree deserves further investigation. The course-based model of transfer success (CBMTS), pioneered by Virginia's Thomas Nelson Community College and Christopher Newport University, focuses on how well transfer students do in those courses requisite to transfer vis-à-vis natives students taking the same courses as part of their lower level of undergraduate studies. Combining this study's approach to academic success–as measured by overall graduation grade point performance–with the CBMTS may help to resolve the debate over merits of an earned associate's degree versus transferring with the requisite number of credits.

At the state system level, questions, such as those addressing persistence and its influence on academic success, deserve a more rigorous examination. While this study only touched upon persistence tangentially, there is evidence that it does influence academic success. The fact that persistence reflects on commitment and discipline makes it a useful factor, thus another issue that deserves further exploration.

Socioeconomic factors may be another important set of influences that are being exerted upon academic success. Factors such as family income and parent's educational level may prove to be more influential

than age, gender and race. Specifically, parent's level of education, and whether the student is a first-generation college attendee, might be a more valid socioeconomic factor, one worthy line of inquiry other researchers may want to pursue.

I believe that, as a result of this study, public policy makers and legislators should give serious consideration to assigning the community college as the prime provider of lower-level undergraduate education. While this might not be politically and emotionally acceptable to private institutions, states such as the Commonwealth of Virginia, with its well-structured governance of public higher education, are well positioned to consider such realignment. By assigning the lower level of undergraduate education to the community college, universities and four-year colleges can accomplish two major higher education goals: 1) by being allowed to concentrate on the upper level undergraduate programs, universities can give more attention to graduate education and research; and 2) by assigning lower and upper levels of undergraduate education to the respective community college and public university, funding and the allocation of public resources in support of higher education can be optimized.

This proposal need not be fully implemented at once, but can be phased in by steps. The first step to be taken would be to pair a community college with a state university that has an established pattern

of college transfer, such as NVCC and GMU. Half the entering freshman would take lower level courses at the university while the other half would take corresponding courses at the community college. Using the methodology of this study, a proof of principle could be established. If, as this study has shown, at the end of four years both natives and transfer students achieve equal academic success, the next step would be to require all incoming freshmen to begin and complete the lower level of undergraduate education at the community college. Thereafter, this could be adopted system-wide. Financial incentives, over and above the low cost of tuition traditionally offered by the community college, might be offered to induce the potential native student to begin undergraduate study at the community college. The cost of this incentive could be absorbed by the savings realized by the realignment and could eventually be phased-out once the realignment matures into an institutional reality.

Now and Beyond

This search for truth is not an idle undertaking. Research echoes the efforts of pioneering scholars such as Floyd M. McDowell, and it forms the vital link that unites the past, present and future. O'Banion (1997) recognized that through innovation the history of the community college continues as a legacy for the future. Without research, educators, administrators, policy makers and legislators fall prey to the very situation that Santayana cautioned us about. Moreover, there is a loss in

the capacity to be creative in the future when there is no search for the truth in the past. But given the knowledge of research and the power of its insights, the quest for scholarship is unstoppable.

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CURRICULUM VITAE

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